CCD MONOCHROME VIDEO CAMERA

AVC-D5CE

SONY®

SERVICE MANUAL

SPECIFICATIONS

Pickup device

Pick device	Interline-transfer CCD
Picture elements	500 × 582 (h/v)
Sensing area	8.8 mm × 6.6 mm (equivalent to 2/3 -inch pickup tube)

Optical and others

Lens mount	C mount
Signal system	CCIR standard
Scanning system	625 lines, 2 : 1 interlace, 25 frames/sec.
Sync system	Internal/external automatic switchable
Horizontal resolution	380 lines
Minimum illumination	3 lux with F1.4, without an infrared cut filter
Sensitivity	2,000 lux, F8.0 (3,200 °K)
Video output	1 Vp-p, sync negative, 75 ohms
Video signal-to-noise ratio	50 dB (with AGC off, 0 dB, γ off)
Power requirements	12 V DC
Power consumption	3.9 W with CMA-D5CE 2.5 W with CMA-D1CE
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	−30°C to +60°C (−22°F to +140°F)
Operating humidity	Less than 70%
Storage humidity	Less than 90%
Vibration resistance	7G (11 Hz to 200 Hz)
Shock resistance	70G
Dimensions	Approx. 50 × 50 × 119 mm (w/h/d) (2 × 2 × 4 3/4 inches) excluding projecting parts
Weight	Approx. 290 g (10 oz)
Accessories supplied	Lens mount cap (1) 12-pin connector (1)

Elément de captage

Elément de captage	Dispositif à transfert de charge (CCD) à transfert par interligne
Eléments d'image	500 × 582 (hor. × vert.)
Zone de captage	8,8 mm × 6,6 mm (équivaut à 2/3 de pouce du tube de prise de vue)

Données optiques et généralités

Monture d'objectif	Monture C
Système du signal	Normes CCIR
Système de balayage	625 lignes, entrelacement 2:1, 25 cadres/sec.
Système de synchronisation	Interne/externe, commutable automatiquement
Définition horizontale	380 lignes
Illumination minimale	3 lux avec F1, 4, sans filtre de coupure infrarouge
Sensibilité	2 000 lux, F8, 0 (3 200°K)
Sortie vidéo	1 V c-c, synchronisation négative, 75 ohms
Rapport signal sur bruit vidéo	50 dB (AGC hors service, 0 dB, γ hors service)
Alimentation	Courant continu de 12 V
Consommation électrique	3,9 W avec CMA-D5CE 2,5 W avec CMA-D1CE
Température de fonctionnement	De 0°C à 40°C (de 32°F à 104°F)
Température d'entreposage	De −30°C à +60°C (de −22°F à +140°F)
Humidité de fonctionnement	Inférieure à 70%
Humidité d'entreposage	Inférieure à 90%
Résistance aux vibrations	7 G (de 11 Hz à 200 Hz)
Résistance aux chocs	70 G
Dimensions	Env. 50 × 50 × 119 mm (l/h/p) (2 × 2 × 4 3/4 pouces) saillies non comprises
Poids	Env. 290 g (10 onces)
Accessoires fournis	1 capuchon de monture d'objectif 1 connecteur à 12 broches

TECHNISCHE DATEN

Bildwandler

Typ	CCD-Halbleiter, Zeilen-Transfer
Bildelemente	500 × 582 (horizontal/vertikal)
Sensorbereich	8,8 mm × 6,6 mm (entspricht einer ⅔-Zoll-Aufnahmeröhre)

Optische Daten und Sonstiges

Objektivanschluß	C-Mount
Signalsystem	CCIR-Norm
Abtastsystem	625 Zeilen, 2:1 Zeilensprung, 25 Vollbilder/s
Synchronisation	intern/extern, automatische Umschaltung
Horizontale Auflösung	380 Zeilen
Min. Beleuchtung	3 Lux bei F1,4, ohne Infrarotfilter
Empfindlichkeit	2.000 Lux, F8,0 (3.200°K)
Videoausgang	1 Vss, Video positiv, 75 Ohm
Signal-Rauschpegel des Videosignals	50 dB (bei AGC ausgeschaltet, 0 dB, γ ausgeschaltet)
Stromversorgung	12 V Gleichspannung
Leistungsaufnahme	3,9 W mit CMA-D5CE 2,5 W mit CMA-D1CE
Betriebstemperatur	0°C bis 40°C
Lagertemperatur	–30°C bis +60°C
Betriebsfeuchtigkeit	unter 70%
Lagerfeuchtigkeit	unter 90%
Vibrationsfestigkeit	7 G (11 Hz bis 200 Hz)
Stoßfestigkeit	70 G
Abmessungen	ca. 50 × 50 × 119 mm (B/H/T) ausschl. vorspringender Teile
Gewicht	ca. 290 g
Mitgeliefertes Zubehör	Objektivanschlußkappe (1) 12pol Anschluß (1)

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SECTION 1
DESCRIPTION

FEATURES

The AVC-D5CE is a monochrome video camera which uses a CCD (Charge Coupled Device), a solid state image sensor.

High-resolution picture
500 picture elements give a high-resolution picture.

⎓ DC IN/VIDEO OUT connector
Through a single coaxial cable, the power is supplied to the camera and the video output signals from the camera are transmitted to the camera AC adaptor.
DC IN connector is also provided so that it is possible to be connected to the corresponding camera AC adaptor.

Low lag, no image burning, and precise image geometry
Low lag– A clear picture can be obtained when shooting a rapidly moving object or shooting in a place where illumination is very low.
No image burning– It is possible to shoot a bright object and to hold the camera on it for a long time.
Precise image geometry can be obtained.

Quick start-up
Shooting can begin within a second after turning on the power.

High sensitivity
Makes it possible to detect images in a dark place.

Shooting in a strong magnetic field
This camera can obtain a stable picture even near an electric furnace or welding machine.

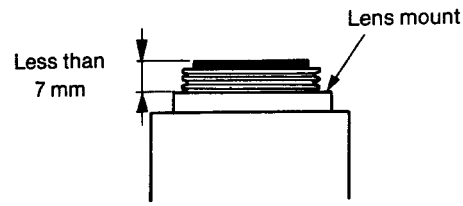
Miniaturized and lightweight
Permits installation on a wall or ceiling with a mounting bracket.

High resistance to vibration and mechanical shock
Makes it possible to take a picture while moving.

GENLOCK IN connector
When two or more cameras are to be used with a video switcher, the same sync signal is input so that each camera can obtain the same picture tone.

TYPES OF LENS

Any C mount lens with a projection from the lens mount of less than 7 mm.

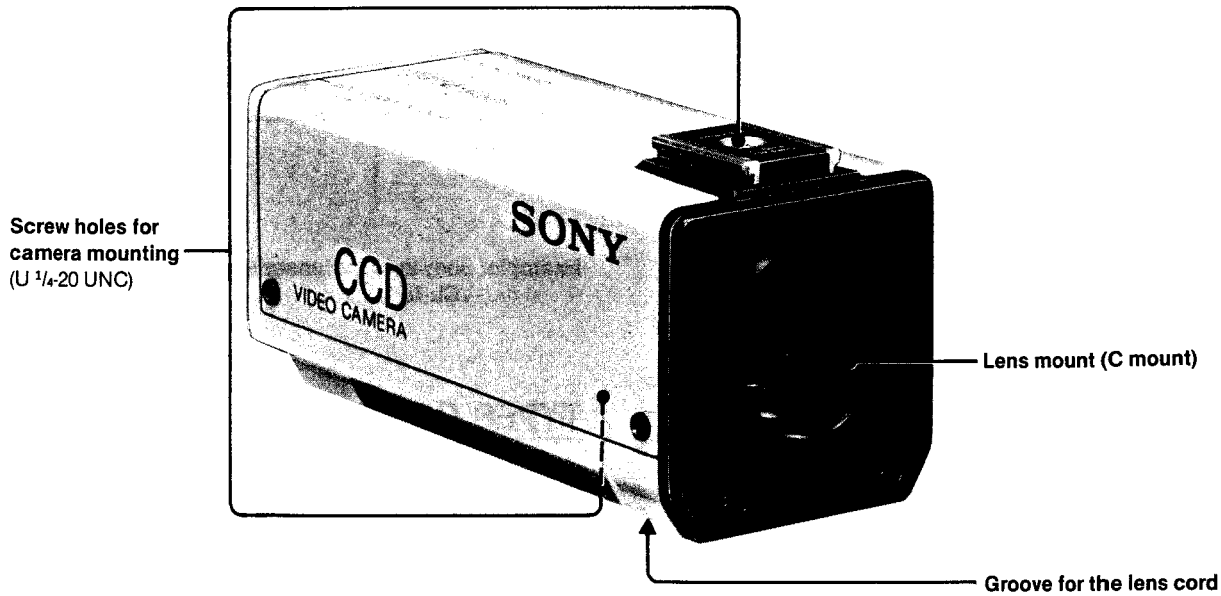


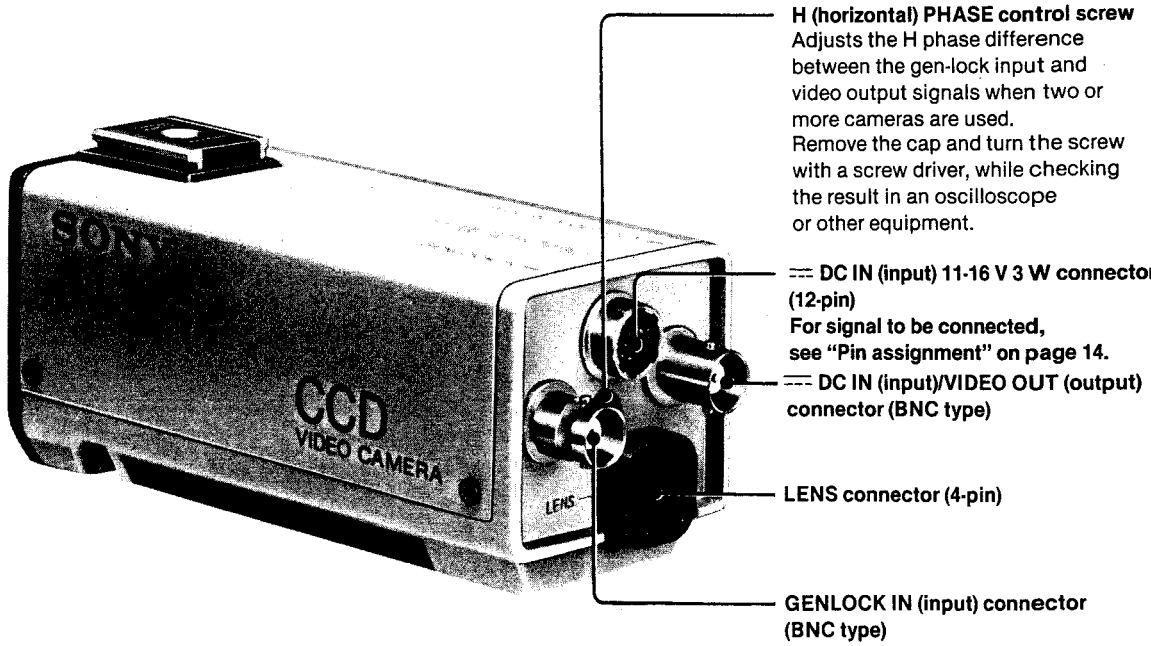
Example: Sony auto iris lenses such as VCL-08Y and the VCL-16Y.

TYPES OF AC ADAPTOR

Sony AC adaptor CMA-D5CE
Sony camera adaptor CMA-D1CE

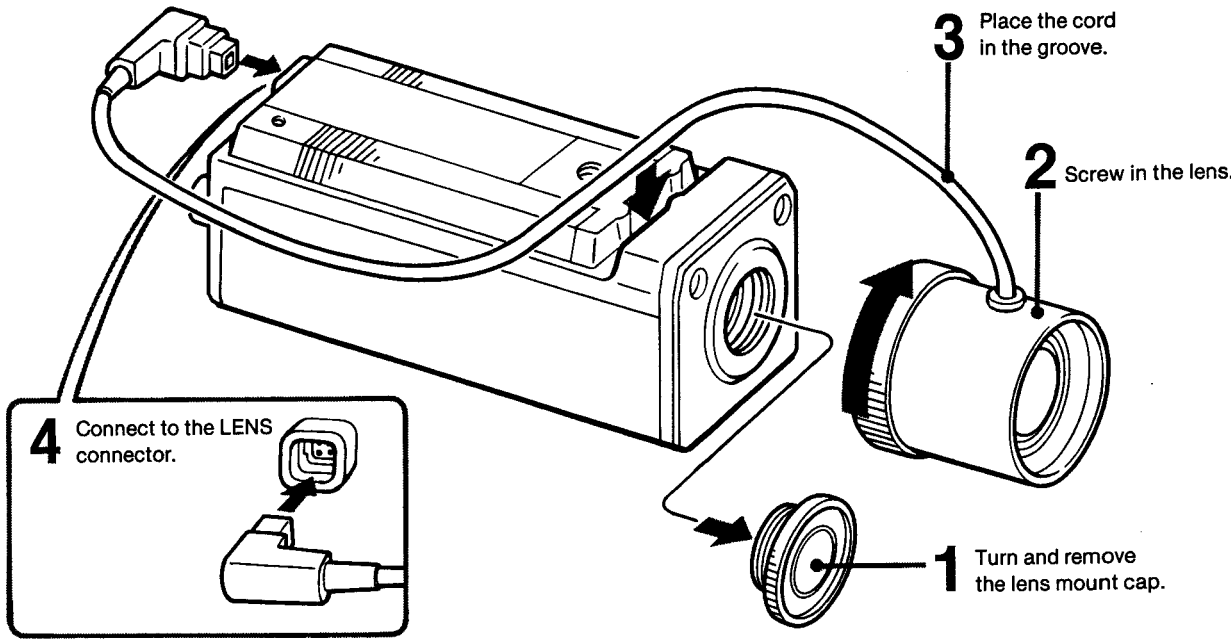
LOCATION AND FUNCTION OF PARTS




H (horizontal) PHASE control screw
Adjusts the H phase difference between the gen-lock input and video output signals when two or more cameras are used.
Remove the cap and turn the screw with a screw driver, while checking the result in an oscilloscope or other equipment.
⎓ DC IN (input) 11-16 V 3 W connector (12-pin)
For signal to be connected, see "Pin assignment" on page 14.
⎓ DC IN (input)/VIDEO OUT (output) connector (BNC type)
LENS connector (4-pin)
GENLOCK IN (input) connector (BNC type)
SONY
CCD
VIDEO CAMERA
LENS

INSTALLATION

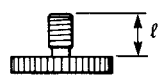
LENS INSTALLATION



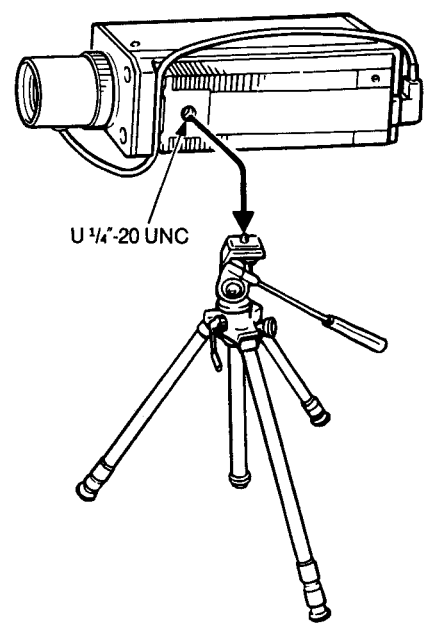
CAMERA INSTALLATION

Attaching the camera to a support or to a mounting bracket makes it possible to install the camera on a wall or ceilling.

Be sure to use the screw specified below.
U 1/4" - 20 UNC
ℓ: ISO standard 4.5 mm ±0.2 mm
ASA standard 0.197 inches

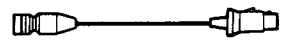


Attaching the camera to the tripod



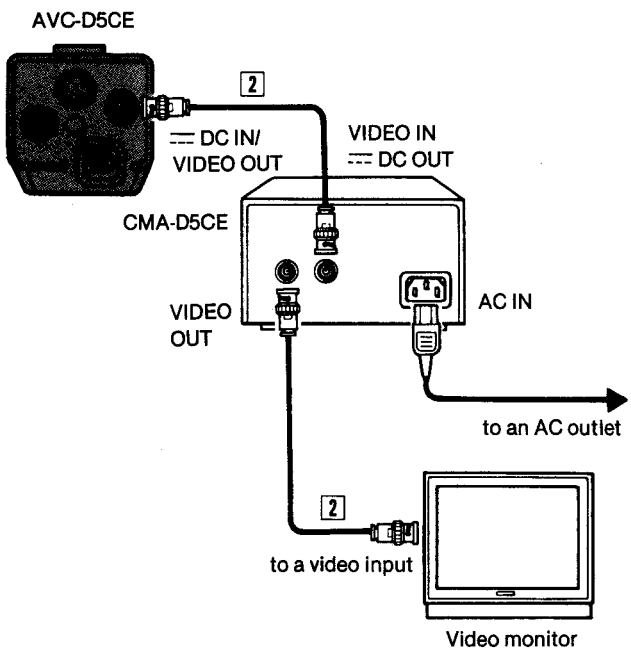
CONNECTIONS

REQUIRED CABLES

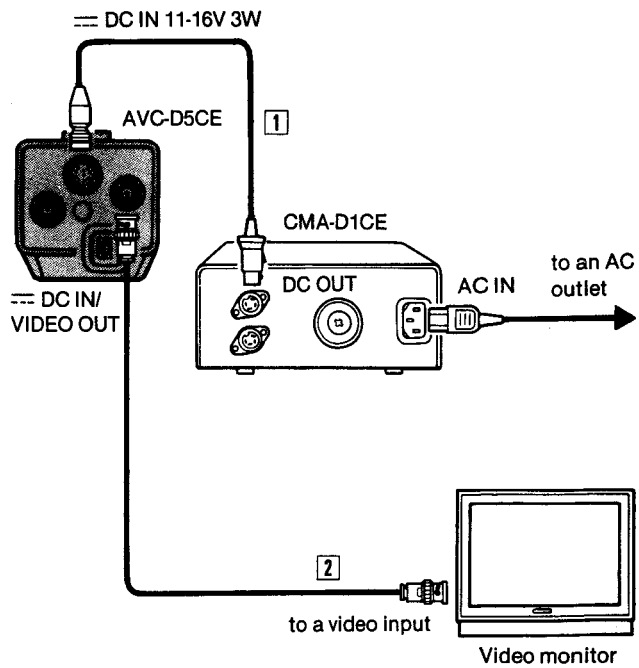
Number in the illustration	Cable	
1	CCDC cable CCDC-10 (10 m, 33 feet)/25 (25 m, 83 feet)/ 50 (50 m, 167 feet)/100 (100 m, 333 feet)	
2	75-ohm coaxial cable (with BNC connector)	

USING A SINGLE CAMERA

Using with the CMA-D5CE AC adaptor

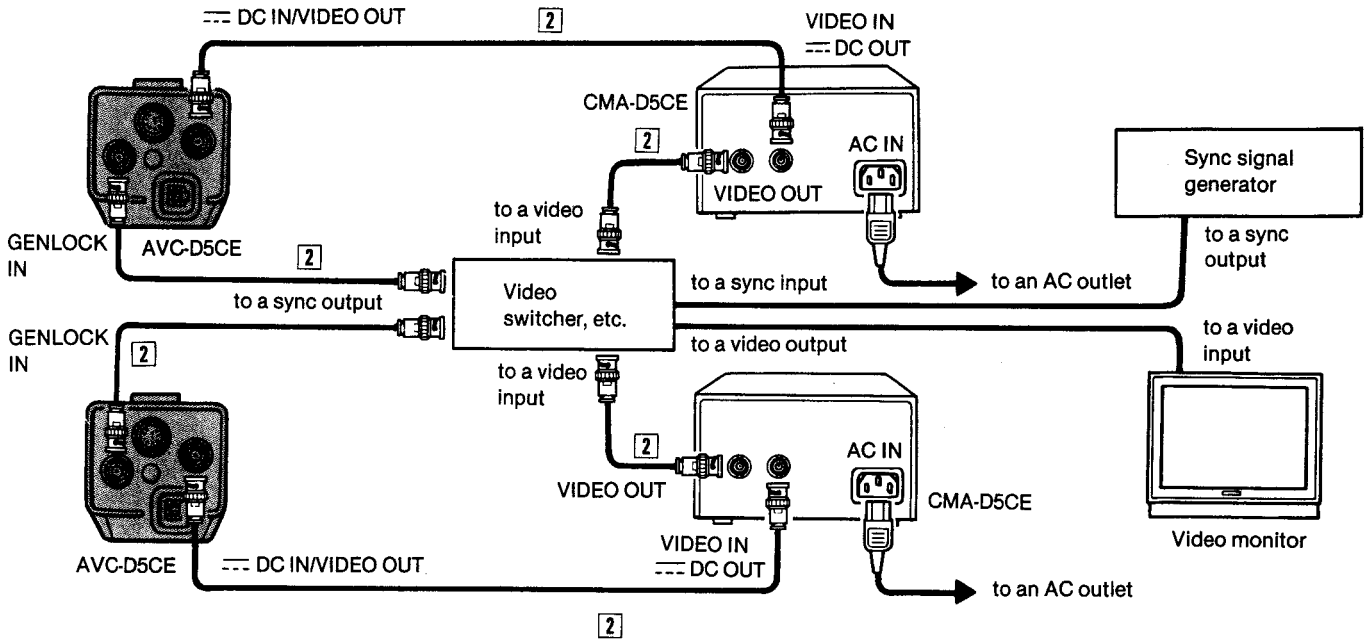


Using with the CMA-D1CE camera adaptor

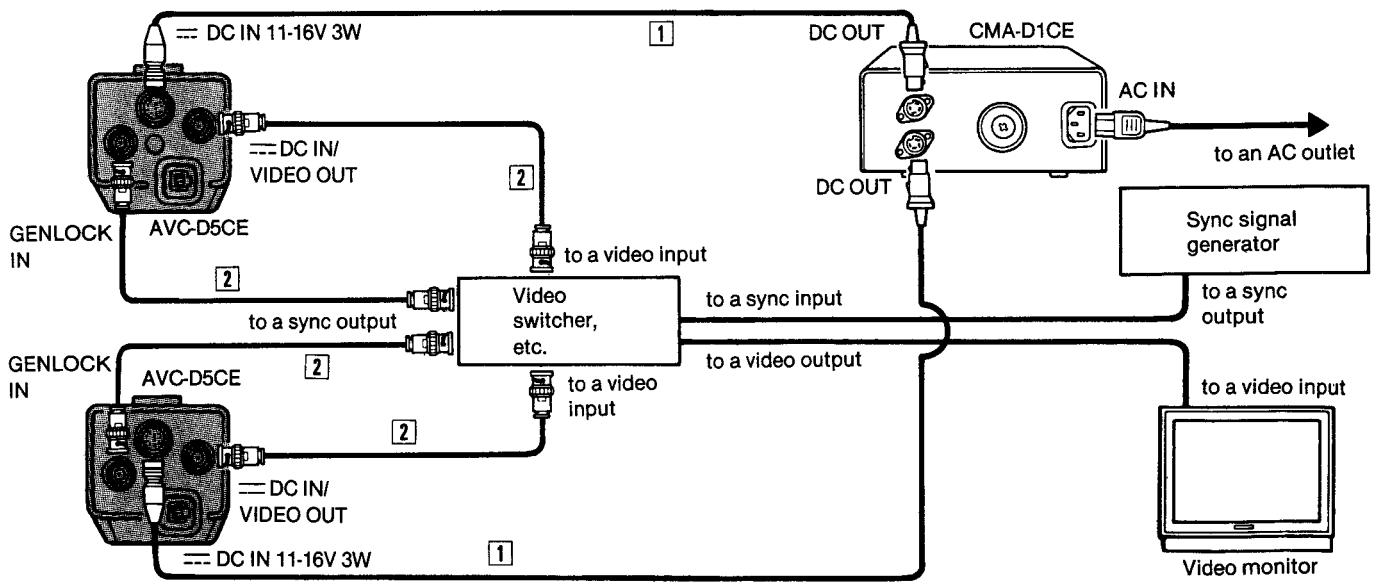


USING TWO OR MORE CAMERAS

Using with the CMA-D5CE AC adaptor



Using with the CMA-D1CE camera adaptor

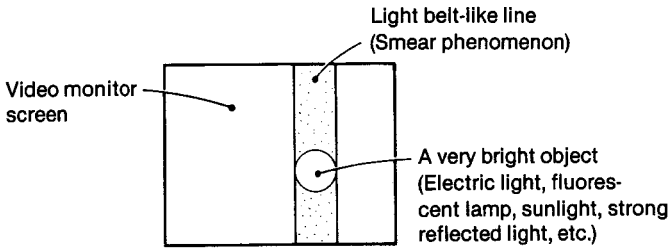


Use of the GENLOCK connector

When two or more cameras are to be used with a video switcher, a sync signal generator supplies each camera with the same sync signal (VBS, VS, or BS), so that each camera can obtain the same picture tone.

SPECIAL CHARACTERISTICS OF A CCD

Smear phenomenon
A smear may appear when a very bright object is shot.

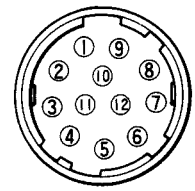


Patterned noise
This may appear uniformly over the entire monitor screen when the camera is operated at a high temperature.

Wavy picture
This may appear when fine stripes, strait lines, etc. are shot. The image monitored on the screen may appear wavy.

⎓ DC IN connector (12-pin)

Pin assignment



Pin No.	Signal
1	Ground
2	12V DC
3	No connection
4	
5	
6	
7	
8	
9	
10	Ground
11	12V DC
12	No connection

Design and specifications subject to change without notice.

SECTION 1
FONCTIONNEMENT

CARACTERISTIQUES

L'AVC-D5CE est une caméra vidéo monochrome qui utilise un dispositif à transfert de charge (CCD), ainsi qu'un senseur d'image à semi-conducteurs.

Image de haute définition
500 éléments d'image garantissent des images de haute définition.

Connecteur ⎓ DC IN/VIDEO OUT
Grâce à un simple câble coaxial, l'alimentation est fournie à la caméra et les signaux de sortie vidéo en provenance de la caméra sont envoyés à l'adaptateur d'alimentation secteur de caméra.
Un connecteur DC IN est également fourni de sorte qu'il est possible de raccorder la caméra à l'adaptateur d'alimentation secteur correspondant.

Effet de rémanence réduit, pas de brûlage d'image, géométrie d'image précise
Effet de rémanence réduit — Il est possible d'obtenir une image claire lors de la prise de vue d'un objet se déplaçant rapidement, ou lors de la prise de vue dans un endroit faiblement éclairé.
Pas de brûlage — Il est possible de braquer la caméra pendant longtemps sur un sujet fortement éclairé.
Enfin, il est possible d'obtenir une géométrie d'image précise.

Démarrage rapide
La prise de vue peut commencer dans une seconde qui suit la mise sous tension.

Sensibilité élevée
Elle permet la détection d'objets dans l'obscurité.

Prise de vue dans un champ magnétique puissant
Cette caméra peut fournir des images parfaitement stables même à proximité de fours électriques ou de machines à souder.

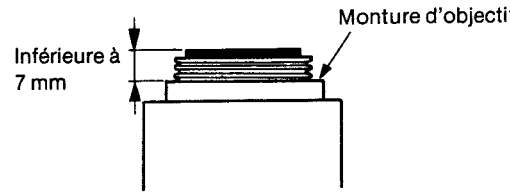
Miniaturisée et légère
Sa compacité et son faible poids permettent de l'installer sur un mur ou au plafond, à l'aide d'un support ou une console de montage.

Haute résistance aux vibrations et aux chocs d'origine mécanique
Il est par conséquent possible de procéder à une prise de vue tout en déplaçant la caméra.

Connecteur GENLOCK IN
Lorsque plusieurs caméras sont utilisées avec un commutateur vidéo, le même signal de synchronisation est fourni, de sorte que chaque caméra peut obtenir la même tonalité d'image.

TYPES D'OBJECTIFS

Tout objectif à monture C, dont la saillie à partir de la monture d'objectif est inférieure à 7 mm.

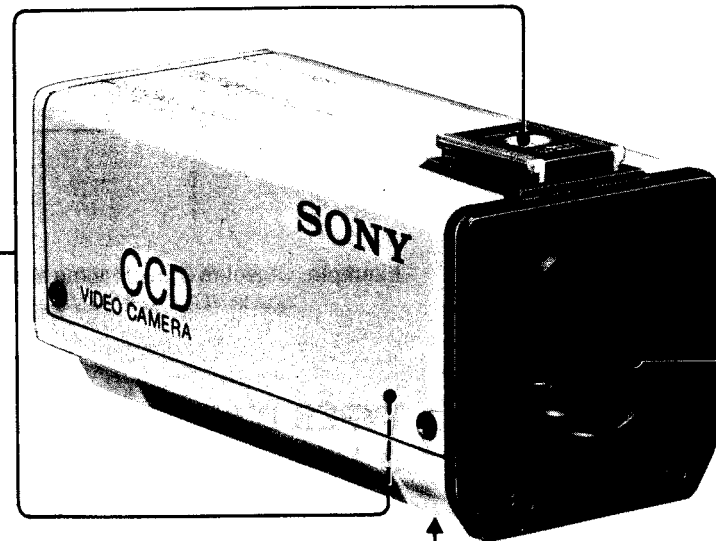


Exemple: Objectifs à diaphragme automatique Sony, tels que le VCL-08Y et le VCL-16Y.

TYPES D'ADAPTATEURS D'ALIMENTATION SECTEUR

Adaptateur d'alimentation secteur Sony CMA-D5CE
Adaptateur d'alimentation pour caméra Sony CMA-D1CE

EMPLACEMENT ET FONCTION DES COMMANDES



Orifices des vis pour le montage de la caméra (U 1/4" - 20 UNC)

Monture d'objectif (monture C)

Rainure pour le câble de l'objectif

Vis de réglage de phase horizontale (H PHASE)
Lorsque plusieurs caméras sont utilisées, cette vis ajuste la différence de phase horizontale entre les signaux d'entrée du verrouillage de générateur et de sortie vidéo.
Enlever le cache et faire tourner la vis à l'aide d'un tournevis, tout en observant les résultats sur un oscilloscope ou un autre appareil de mesure.

Connecteur d'entrée de courant continu (⎓ DC IN 11-16 V 3 W) (à 12 broches)
En ce qui concerne le signal à raccorder, voir sous "Agencement des broches" en page 27.

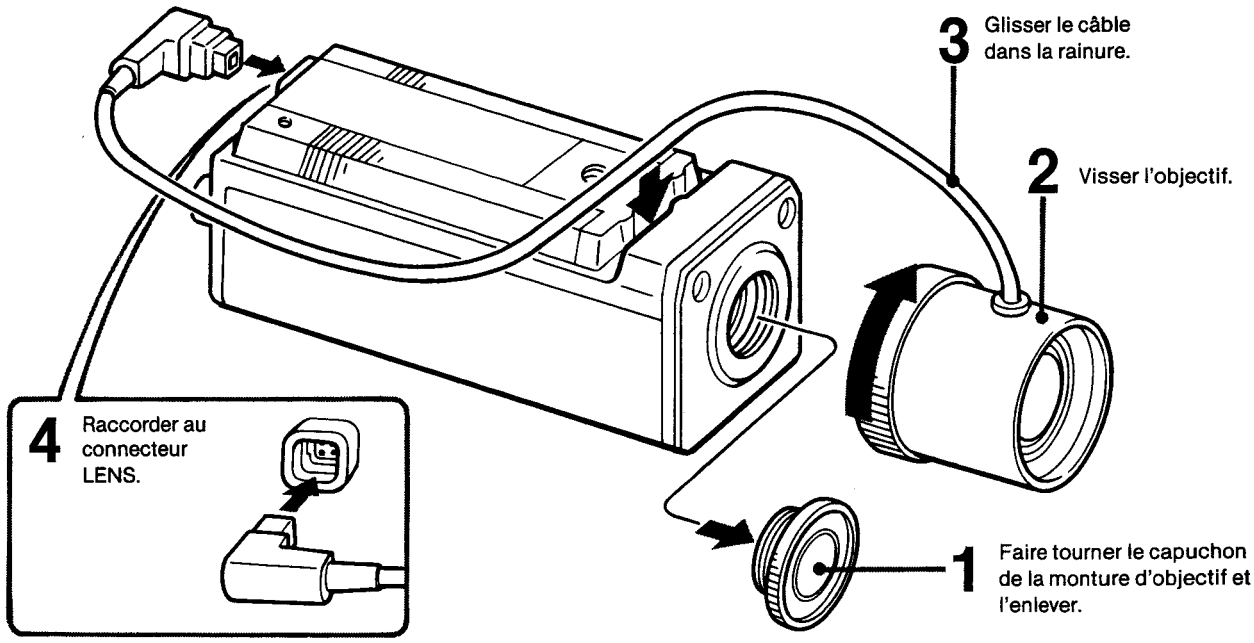
Connecteur d'entrée de courant continu/de sortie vidéo (⎓ DC IN/VIDEO OUT) (type BNC)

Connecteur d'objectif (LENS) (à 4 broches)

Connecteur d'entrée de verrouillage de générateur (GENLOCK IN) (type BNC)

INSTALLATION

INSTALLATION DE L'OBJECTIF

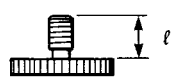

3 Glisser le câble dans la rainure.
2 Visser l'objectif.
4 Raccorder au connecteur LENS.
1 Faire tourner le capuchon de la monture d'objectif et l'enlever.

INSTALLATION DE LA CAMERA

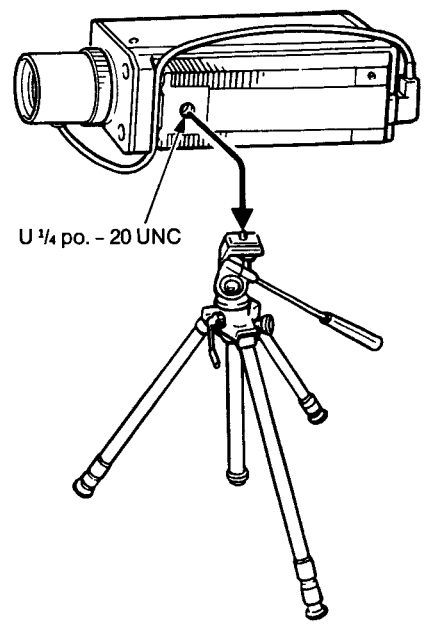
La possibilité de fixer la caméra sur un support ou une console de montage permet de fixer la caméra sur un mur ou au plafond.

S'assurer d'utiliser la vis spécifiée ci-dessous.

U ¼ po. - 20 UNC	
ℓ: norme ISO	4,5 mm ±0,2 mm
norme ASA	0,197 pouce



Fixation de la caméra sur un trépied



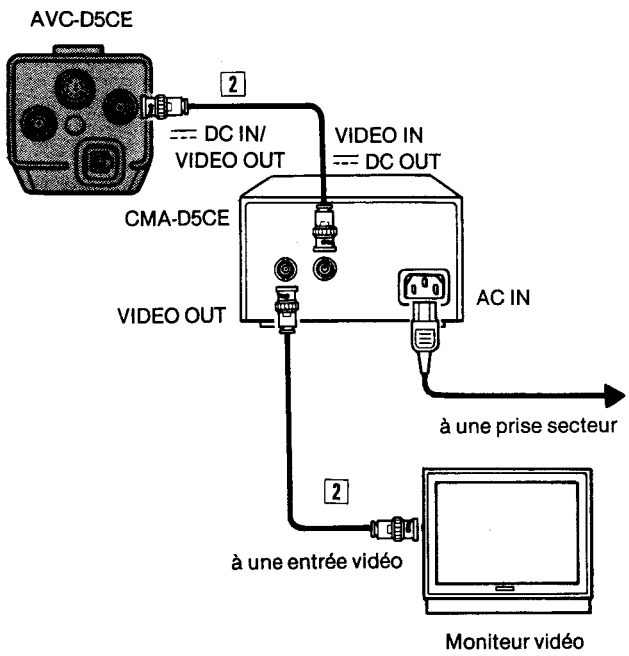
CONNEXIONS

CABLES RECOMMANDES

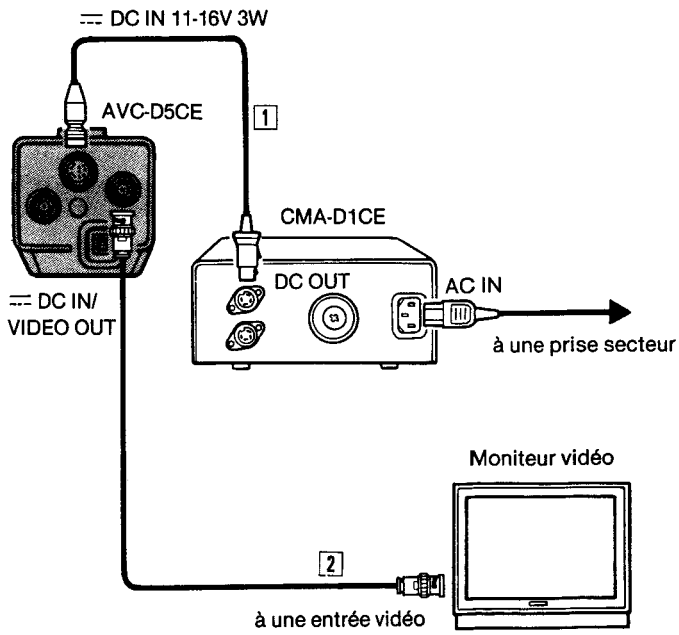
Numéro dans l'illustration	Câble	
1	Câble CCDC CCDC-10 (10m, 33 pi.)/25 (25 m, 83 pi.)/ 50 (50m, 167 pi.)/100 (100m, 333 pi.)	
2	Câble coaxial de 75 ohms (avec connecteur BNC)	

UTILISATION D'UNE SEULE CAMERA

Utilisation avec l'adaptateur d'alimentation secteur CMA-D5CE

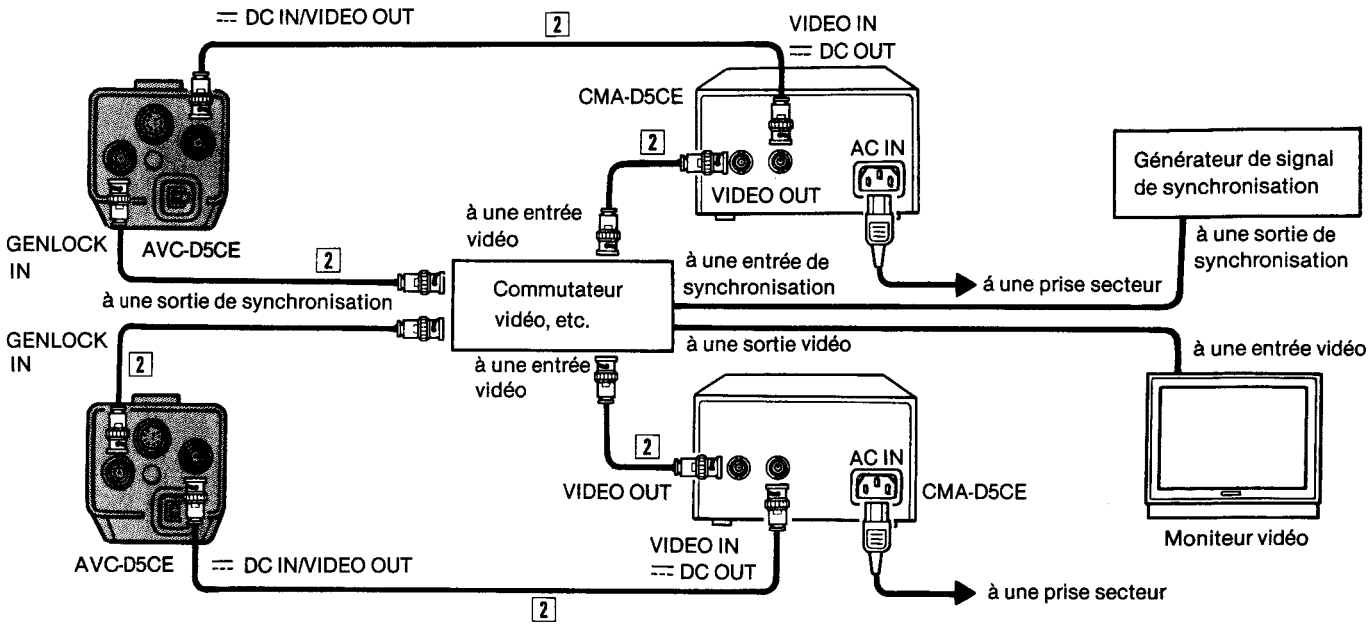


Utilisation avec l'adaptateur d'alimentation pour caméra CMA-D1CE

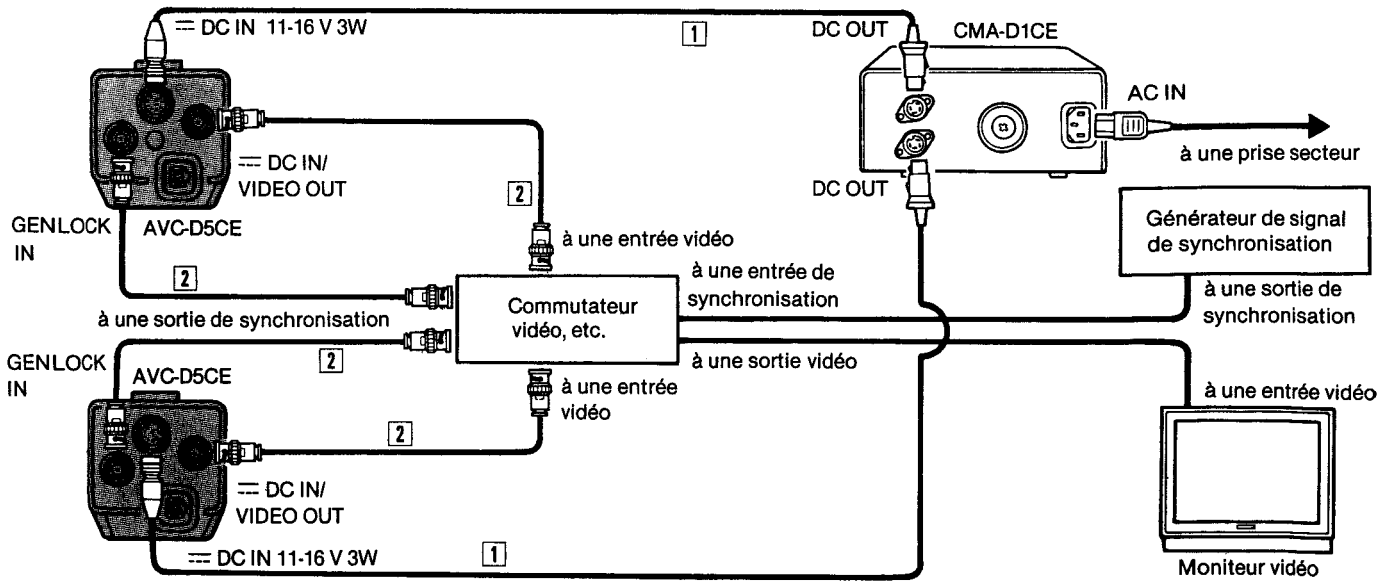


UTILISATION DE PLUSIEURS CAMERAS

Utilisation avec l'adaptateur d'alimentation secteur CMA-D5CE



Utilisation avec l'adaptateur d'alimentation pour caméra CMA-D1CE

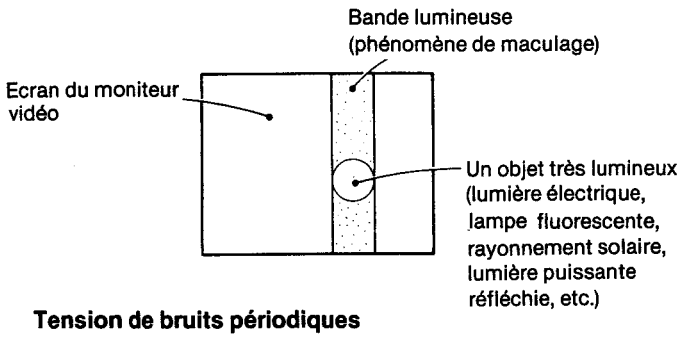


Utilisation du connecteur GENLOCK IN

Lorsque plusieurs caméras sont utilisées avec un commutateur vidéo, un générateur de signal de synchronisation envoie à chaque caméra le même signal de synchronisation (VBS, VS, ou BS) de sorte que chaque caméra obtienne la même tonalité d'image.

CARACTERISTIQUES SPECIALES D'UNE CAMERA CCD

Phénomène de maculage
Un phénomène de maculage peut se manifester lorsque la caméra est braquée sur un sujet fortement éclairé.

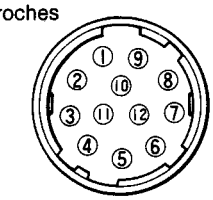

Bande lumineuse
(phénomène de maculage)
Ecran du moniteur vidéo
Un objet très lumineux (lumière électrique, lampe fluorescente, rayonnement solaire, lumière puissante réfléchie, etc.)

Tension de bruits périodiques
Lorsque la caméra fonctionne à de hautes températures, ce phénomène peut apparaître uniformément sur toute la surface de l'écran du moniteur.

Image gondolée
Ce phénomène peut apparaître lors de la prise de vue de fines rayures, de lignes droites, etc. L'image qui apparaît sur l'écran du moniteur semble gondolée.

Connecteur d'entrée de courant continu (⎓ DC IN) (à 12 broches)

Agencement des broches



N° de broche	Signal
1	Masse
2	Courant continu de 12V
3	Pas de connexion
4	
5	
6	
7	
8	
9	
10	Masse
11	Courant continu de 12V
12	Pas de connexion

La conception et les spécifications sont sujettes à des modifications sans avis préalable.

SECTION 1
ALLGEMEINE DESKRIPTION

BESONDERE MERKMALE

Modell AVC-D5CE ist eine S/W-Videokamera mit einem CCD-Halbleiter-Bildwandler (Charge Coupled Device).

Hohe Auflösung
Die Kamera weist eine sehr hohe Auflösung (500 × 582 Bildpunkte) auf.

Kombinierter Videoausgang/Gleichspannungseingang
Die Stromversorgung und die Abgabe des Videosignals zum Kamera-Netzadapter erfolgt über ein einziges Koaxialkabel. Außerdem ist auch noch ein getrennter Gleichspannungseingang vorhanden, um die Kamera mit einem anderen Netzadapter betreiben zu können.

Nur geringes Nachziehen, keine Einbrenngefahr und präzise Bildgeometrie
Beim Aufnehmen von schnellen Bewegungen tritt kaum ein Nachzieheffekt auf, und auch beim Aufnehmen unter geringer Beleuchtung erhält man gute Resultate.
Auch helle Objekte können problemlos über längere Zeit aufgenommen werden: es besteht praktisch keine Einbrenngefahr. Darüber hinaus liefert der CCD-Bildwandler eine ausgezeichnete Bildgeometrie.

Schnelle Aufnahmebereitschaft
Bereits eine Sekunde nach dem Einschalten der Stromzufuhr kann mit dem Aufnehmen begonnen werden.

Hohe Empfindlichkeit
Dank der hohen Empfindlichkeit erhält man auch bei sehr schwacher Beleuchtung noch ein akzeptables Bild.

Keine Beeinträchtigung durch externe Magnetfelder
Selbst in der Nähe von elektrischen Backöfen oder Schweißgeräten, von denen starke Magnetfelder ausgehen, kann mit der Kamera problemlos aufgenommen werden.

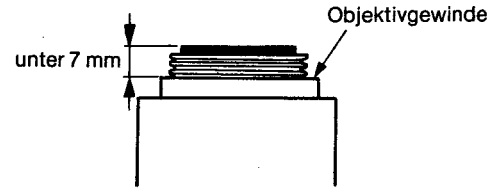
Kompakt und leicht
Die Kamera kann einfach mit einer Halterung an der Wand oder der Decke befestigt werden.

Vibrationsfest und unempfindlich gegen Stöße
Die Kamera eignet sich auch sehr gut für mobilen Einsätze.

Anschluß für externe Synchronisation (GENLOCK IN)
Bei der Zusammenschaltung mehrerer Kameras über eine Video-Schalteinheit kann jeder Kamera das gleiche Synchronsignal zugeleitet werden, so daß alle Kameras den gleichen Farbton liefern.

OBJEKTIVTYP

Jedes Objektiv mit C-Mount, dessen Gewindehals kürzer als 7 mm ist, kann angebracht werden.



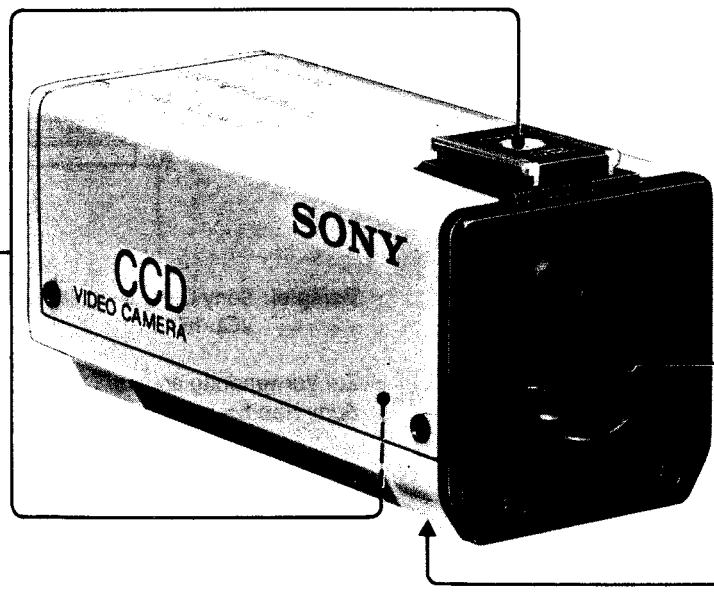
Beispiel: Sony Objektive mit Automatikblende VCL-08Y und VCL-16Y.

Zur Verwendung anderer Objektive lassen Sie sich von Ihrem Sony Händler beraten.

NETZADAPTERTYP

Sony Netzadapter CMA-D5CE
Sony Kameraadapter CMA-D1CE

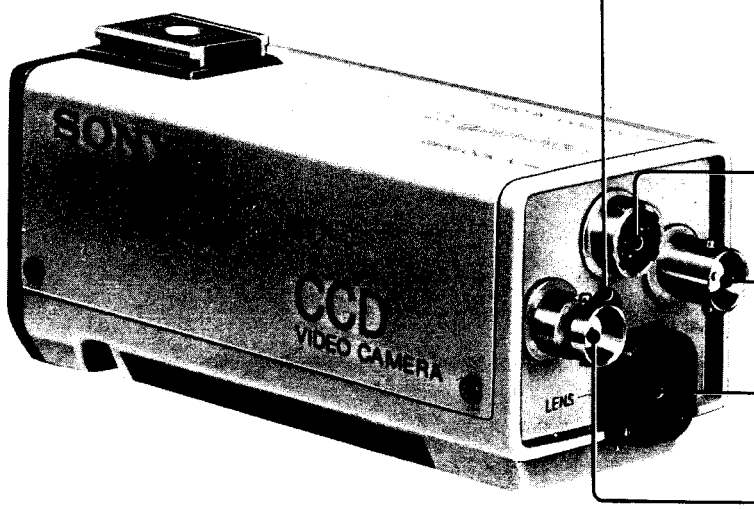
LAGE UND FUNKTION DER TEILE



Schraubenöffnungen für Kamerahalterung (U¼ – 20 UNC)

Objektivanschluß (C-Mount)

Nut für Objektivkabel



Horizontalphasen-Regelschraube (H PHASE)
Zur Einstellung der H-Phasendifferenz zwischen den Synchroneingangssignal und Videoausgangssignal bei Verwendung mehrerer Kameras. Die Kappe abnehmen und die Schraube mit einem Schraubenzieher unter Beobachtung eines Oszilloskops oder eines anderen Meßgeräts einjustieren.

11-16V/3W-Gleichspannungseingang (⎓ DC IN) (12pol)
Anschlußsignale siehe „Stiftbelegung" auf Seite 40.

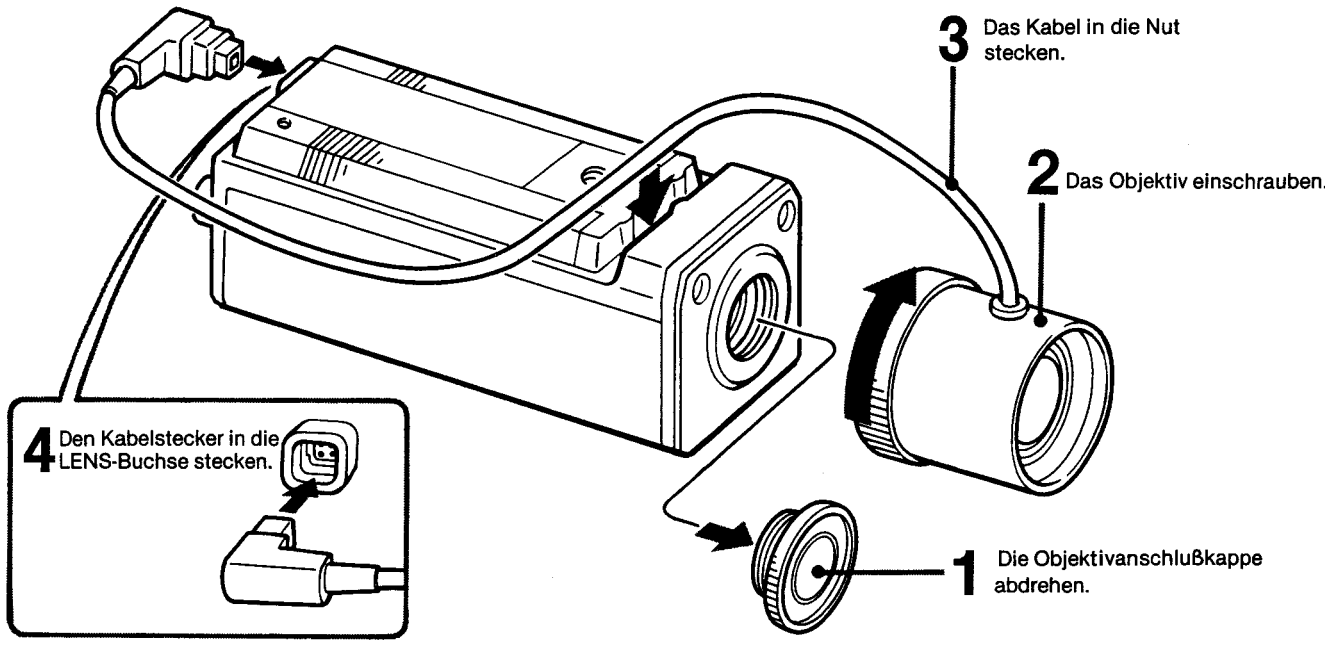
Gleichspannungseingang/Videoausgang (⎓DC IN/VIDEO OUT) (BNC-Buchse)

Objektivbuchse (LENS) (4pol)

Synchronsignaleingang (GENLOCK IN) (BNC-Buchse)

INSTALLATION

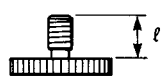
ANBRINGUNG DES OBJEKTIVS


3 Das Kabel in die Nut stecken.
2 Das Objektiv einschrauben.
4 Den Kabelstecker in die LENS-Buchse stecken.
1 Die Objektivanschlußkappe abdrehen.

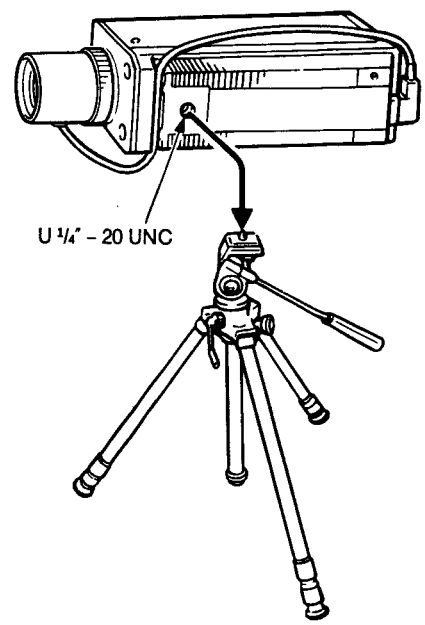
ANBRINGUNG DER KAMERA

Die Kamera kann auch auf einer Aufnahme oder einer Montagehalterung montiert und dann an der Wand oder der Decke installiert werden.

Die verwendete Schraube muß folgende Maße besitzen:
U ¼" - 20 UNC
ℓ: ISO - Norm 4,5 mm ± 0,2 mm
ASA - Norm 0,197 Zoll



Befestigung der Kamera auf einen Stativ



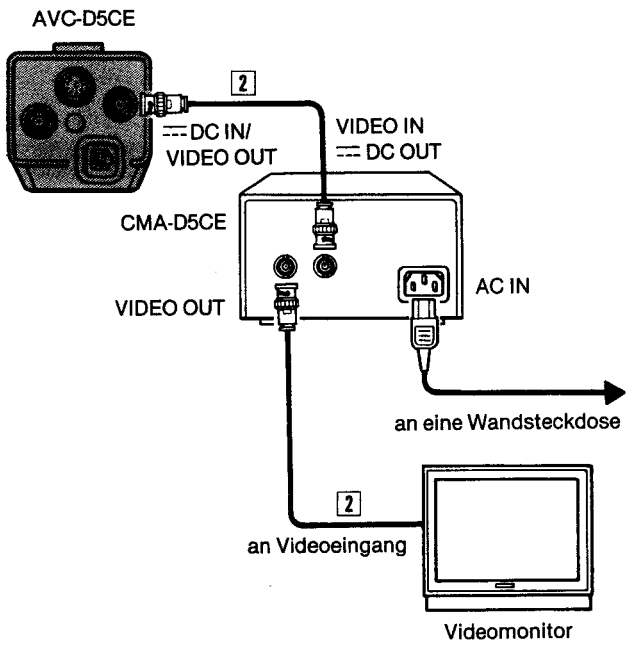
ANSCHLUSS

ERFORDERLICHE KABEL

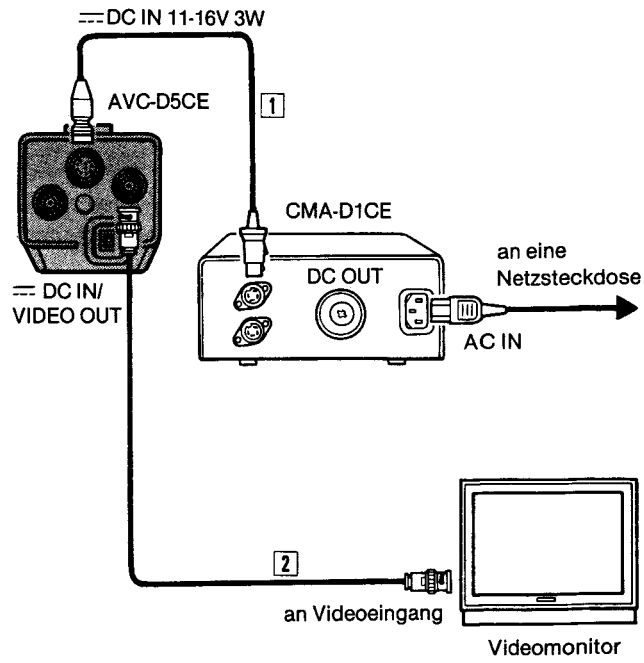
Nummer in der Abbildung	Kabel	
1	CCDC-Kabel CCDC-10 (10 m)/25 (25 m)/ 50 (50 m)/100 (100 m)	
2	75-Ohm-Koaxialkabel (mit BNC-Anschlüssen)	

VERWENDUNG EINER EINZIGEN KAMERA

Verwendung mit dem Netzadapter CMA-D5CE

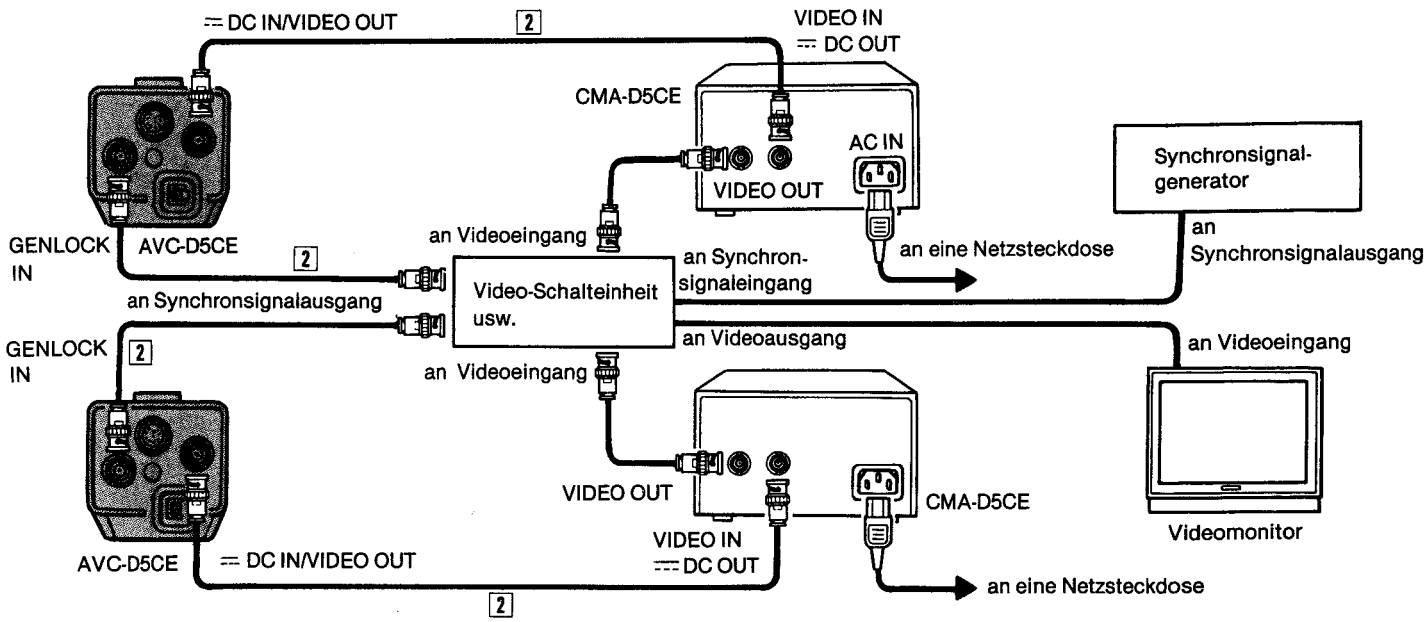


Verwendung mit dem Kameraadapter CMA-D1CE

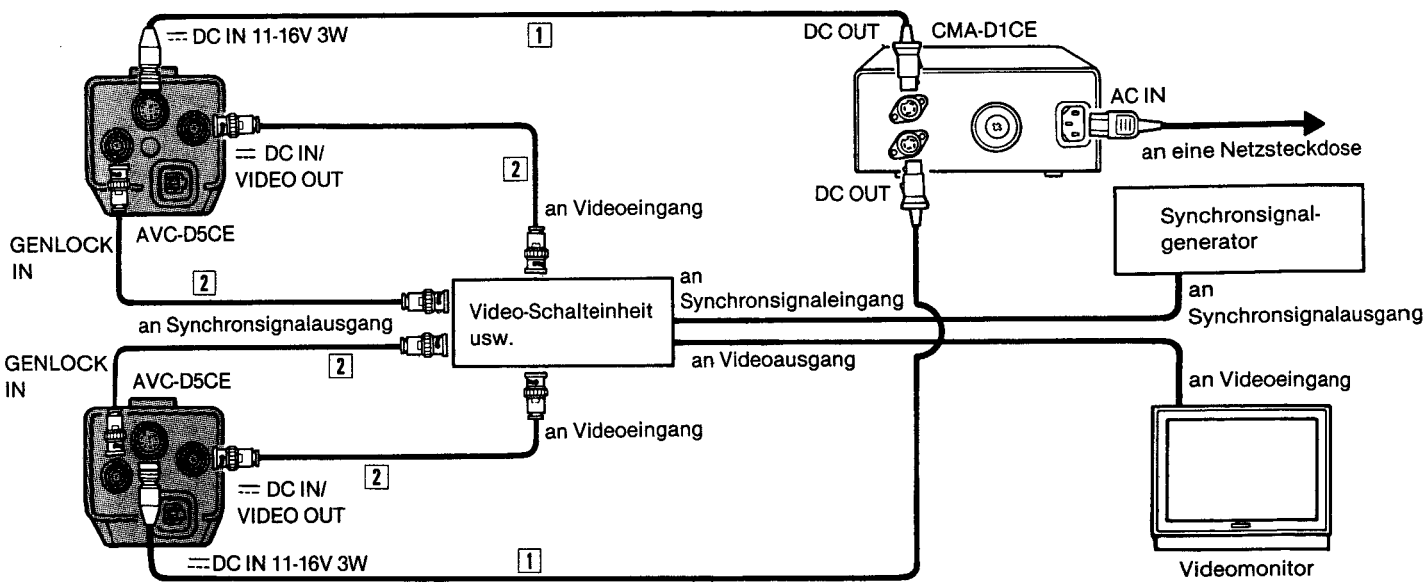


VERWENDUNG MEHRERER KAMERAS

Betrieb mit dem Netzadapter CMA-D5CE



Betrieb mit dem Kameraadapter CMA-D1CE

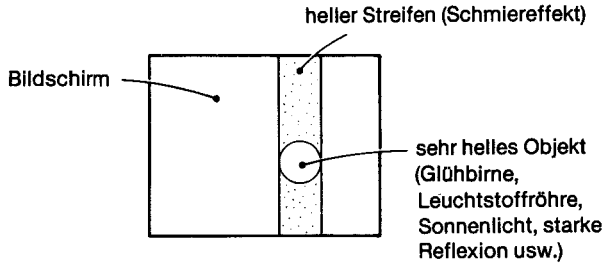


Verwendung der GENLOCK-Buchse

Wenn mehrere Kameras mit einer Video-Schalteinheit zusammengeschaltet werden, liefert der Synchronsignalgenerator jeder Kamera das gleiche Synchronsignal (VBS, VS oder BS), so daß alle Kameras den gleichen Farbton aufweisen.

BESONDERHEITEN DES CCD-BILDWANDLERS

Schmiereffekt
Beim Aufnehmen von sehr hellen Objekten kann es zu folgendem Effekt kommen:

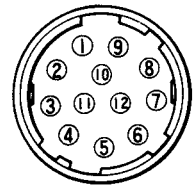

heller Streifen (Schmiereffekt)
Bildschirm
sehr helles Objekt (Glühbirne, Leuchtstoffröhre, Sonnenlicht, starke Reflexion usw.)

Moire-Störungen
Bei Betrieb unter hohen Temperaturen kann dem gesamten Bild ein Moire-Muster überlagert sein.

Welleneffekt
Beim Aufnehmen von feinen Streifen, geraden Linien usw. können diese wellenartig erscheinen.

Gleichspannungseingang (12pol)

Stiftbelegung

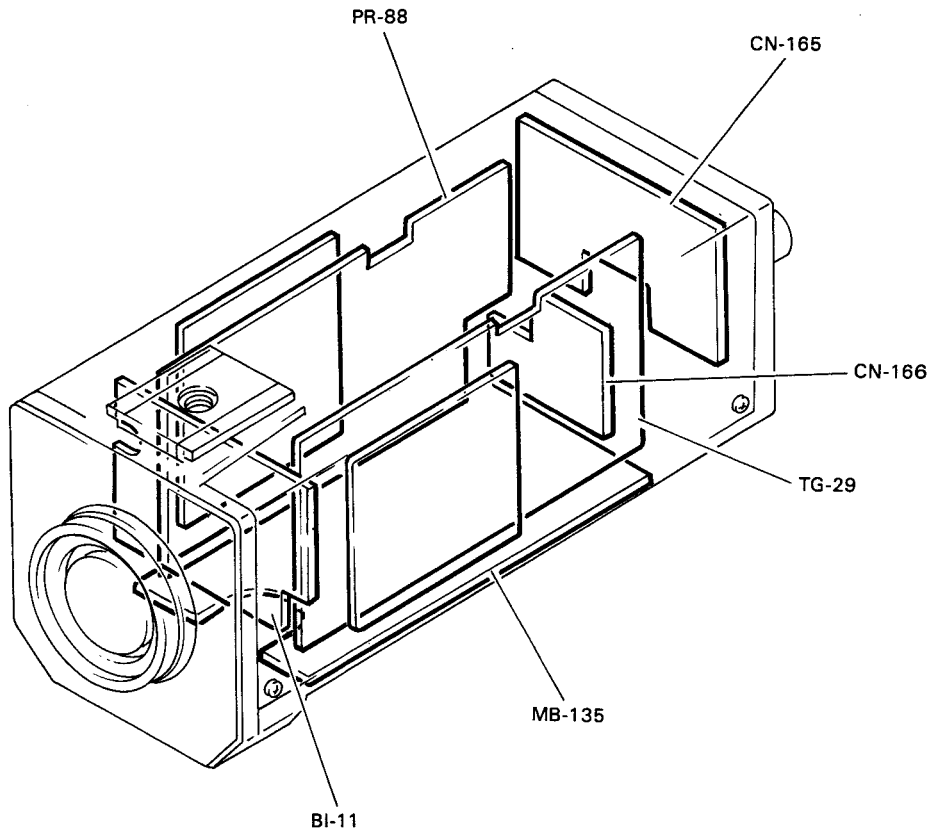


Stift-Nr.	Signal
1	Masse
2	12V Gleichspannung
3	Kein Anschluß
4	
5	
6	
7	
8	
9	
10	Masse
11	12V Gleichspannung
12	Kein Anschluß

Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

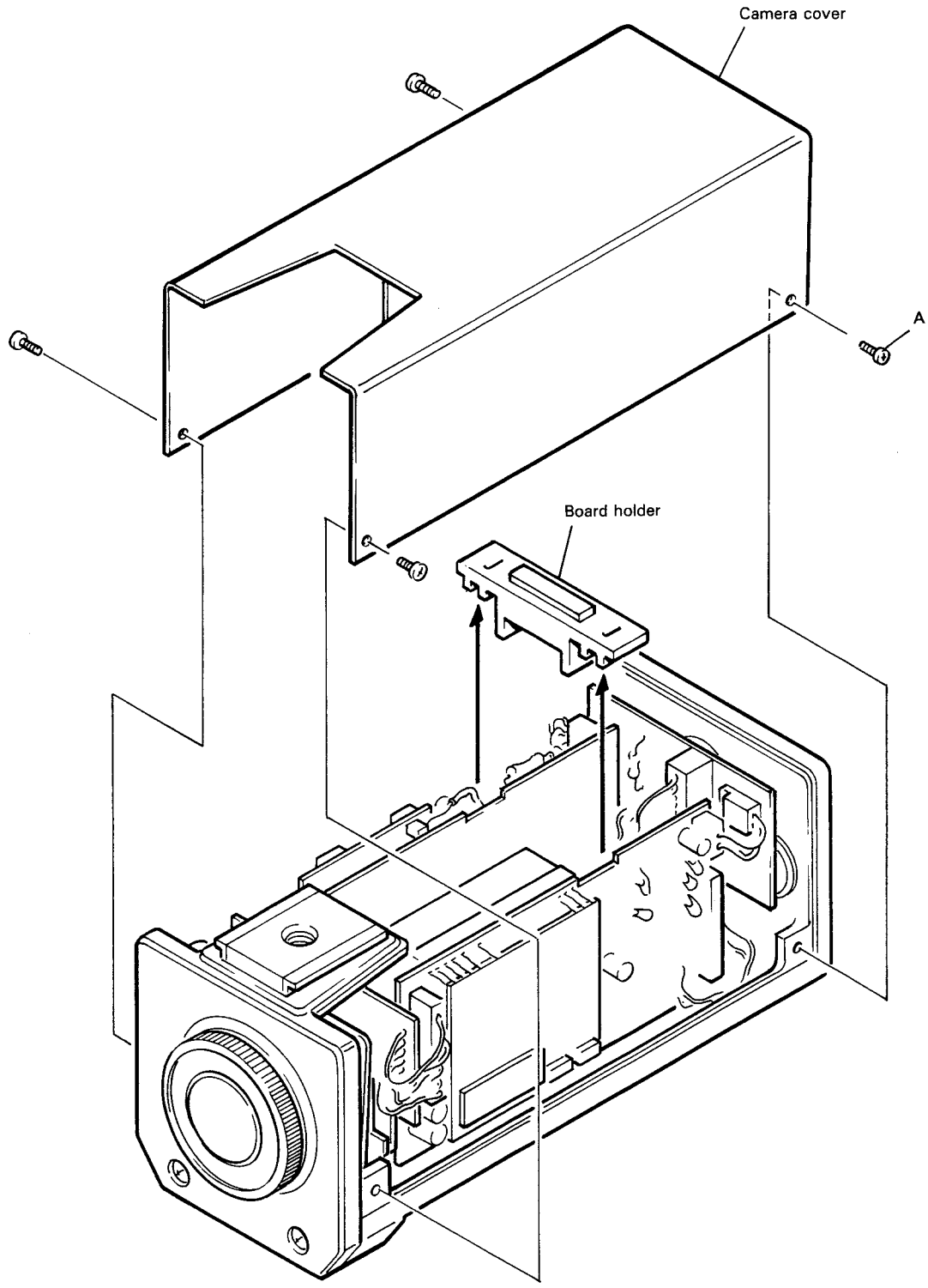
SECTION 2
SERVICE INFORMATION

2-1. LOCATION OF MOUNTED CIRCUIT BOARD



2-2. REMOVAL OF CABINET

Remove four screws A (+B 2 x 4) and remove a camera cover.
Remove a board holder securing the PR-88 and TG-29 boards.

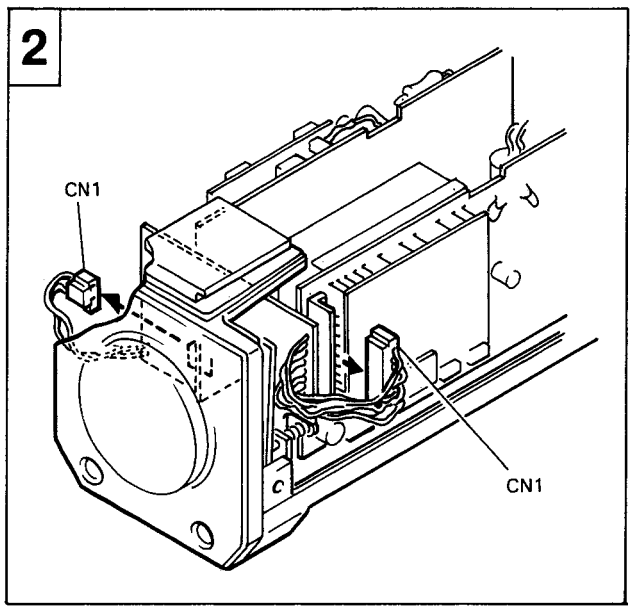


2-3. REPLACEMENT OF MAIN PARTS

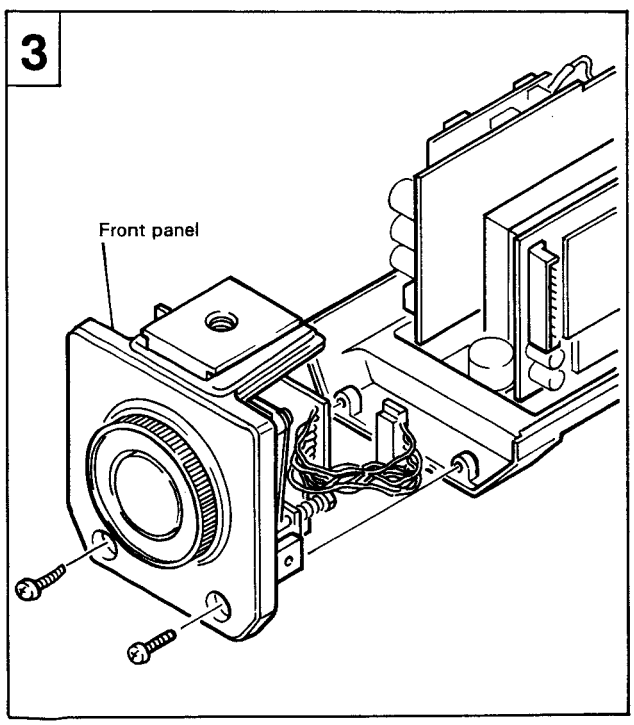
2-3-1. CCD ASSY Replacement

1. Remove the cabinet, referring to Section 2-2.

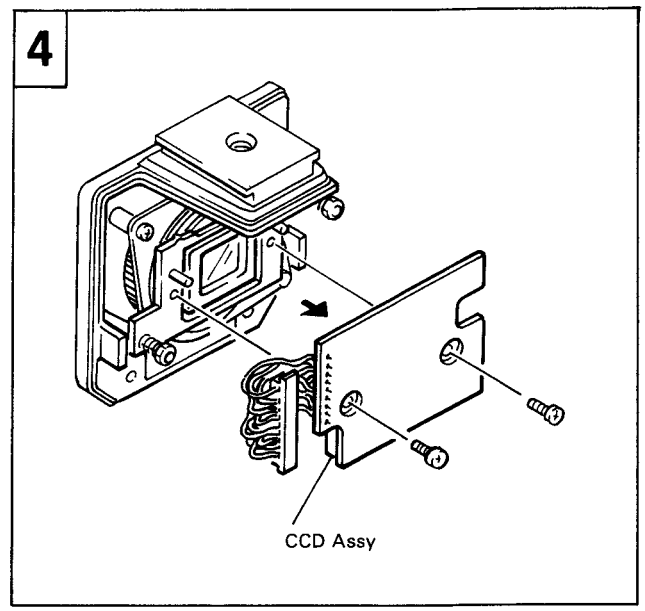
2. Disconnect two connectors, CN1 on the PR-88 board and CN1 on the TG-29 board.



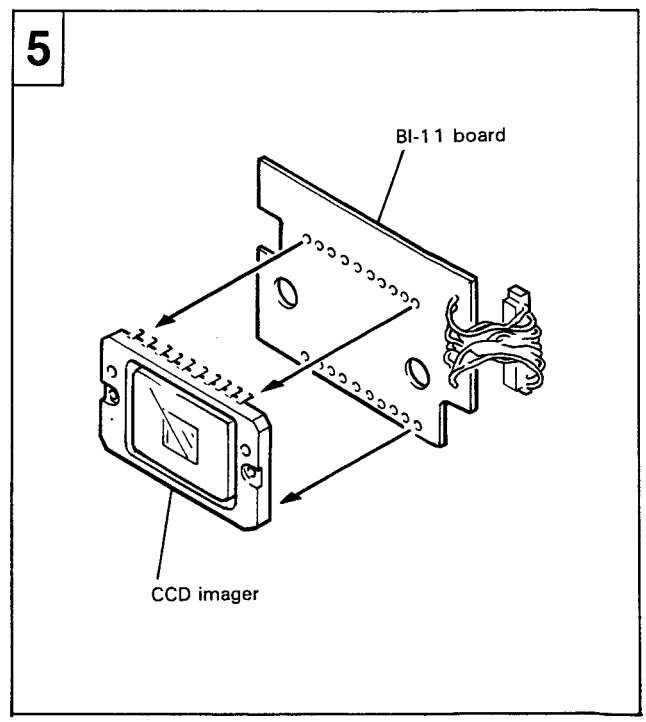
3. Remove two screws on the front panel.



4. Remove two screws as illustrated. Pull the board out in the direction of arrow to remove the CCD ASSY.



5. Unsolder pins 1 through 20 of the CCD imager on the BI-11 board, using solder wick or a vacuum type desoldering tool. Remove the CCD imager.

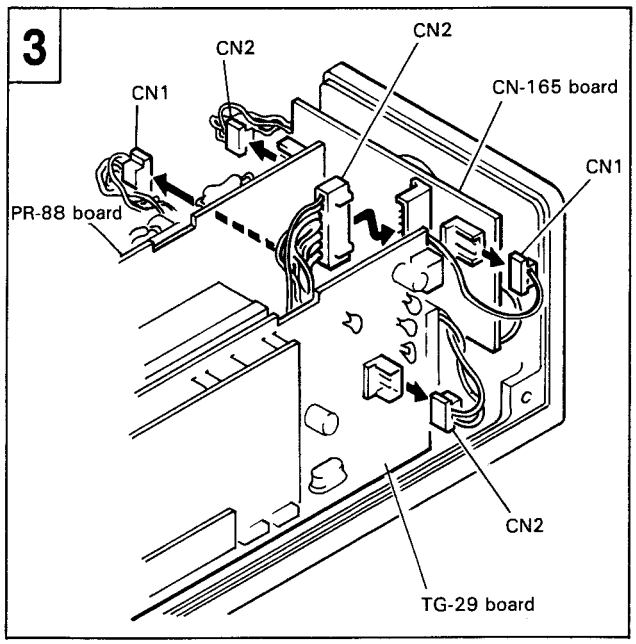


2-3-2. Replacement of PR-88 and TG-29 boards

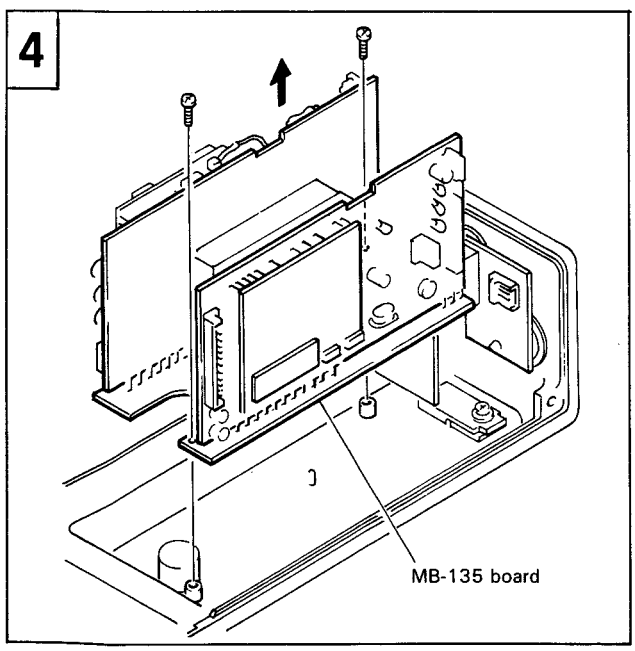
1. Remove the cabinet, referring to Section 2-2.

2. Remove the front panel, referring to Steps 2 and 3 in Section 2-3-1.

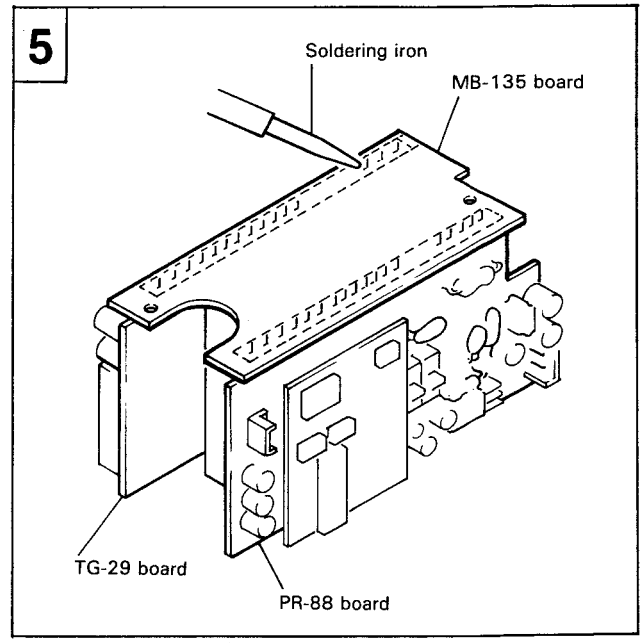
3. Disconnect five connectors, CN1 and CN2 on the CN-165 board, CN2 on the PR-88 board, CN2 on the TG-29 board and CN1 on the CN-166 board.



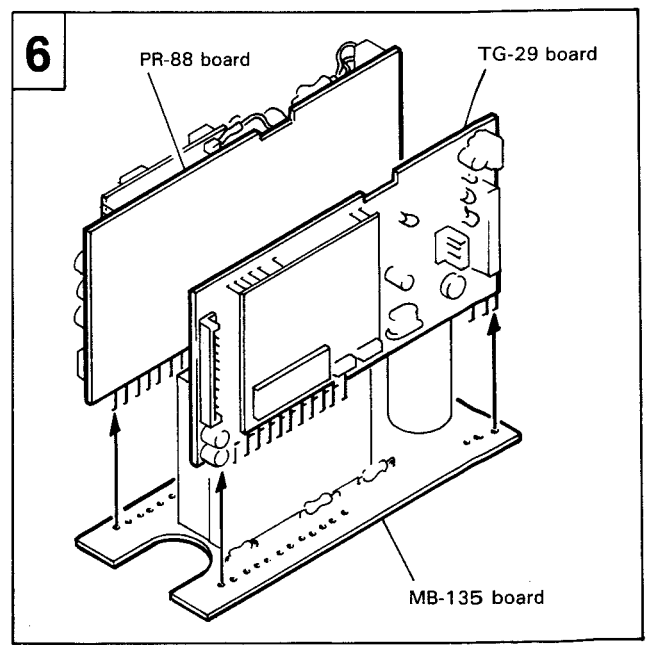
4. Remove two screws shown in the figure.
   Lift the MB-135 board up in the direction of arrow to remove it from the chassis.



5. Place the MB-135 board as illustrated.
   Remove the solder on pins on the PR-88 and TG-29 boards respectively, using solder wick or a vacuum type desoldering tool.



6. The PR-88 and TG-29 boards can be removed from the MB-135 board.



2-4. ALIGNMENT

2-4-1. Equipment Required

- Siemens Star chart
- Lens
- Camera adaptor

2-4-2. Mechanical Back Focus Adjustment

Preparation: Connect the camera adaptor to AVC-D5/D5CE and turn the power on.
(See the figure below)
Object: Siemens Star chart
Lens iris: Open
Adjust:

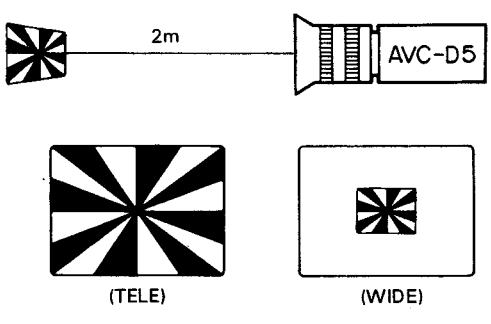
1. Set the zoom control at TELE and shoot a siemens star chart. Adjust the focus control so that the image is focused.

2. Set the zoom control at WIDE and adjust the back focus adjusting ring so that the image is focused. At this time, do not turn the focus control.

3. Repeat steps 1 and 2 several times. Check that the image is focused while turning the zoom control from TELE to WIDE. (at this time, the focus control should be set at 1.5 m ~ 3 m.)

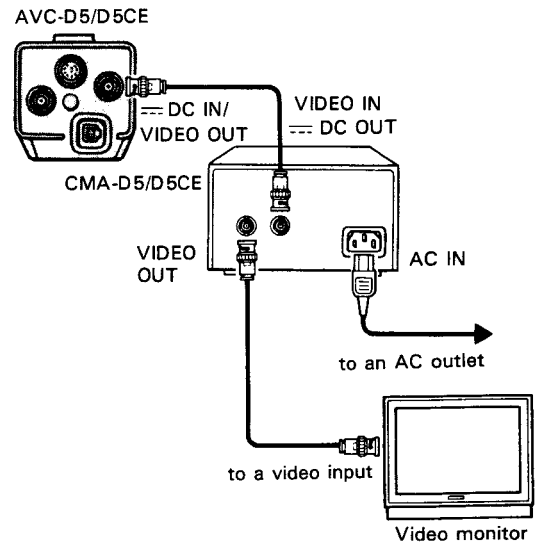
4. Press a filter case against the back focus adjusting ring. Check the filter case is not moved.
If it is moved, the above adjustments should be performed from the beginning.

Note:
Do not turn CV1 on the TG-29 board as it has been correctly adjusted at the factory. There is a case that the AVC-D5/D5CE does not genlock if it is turned.

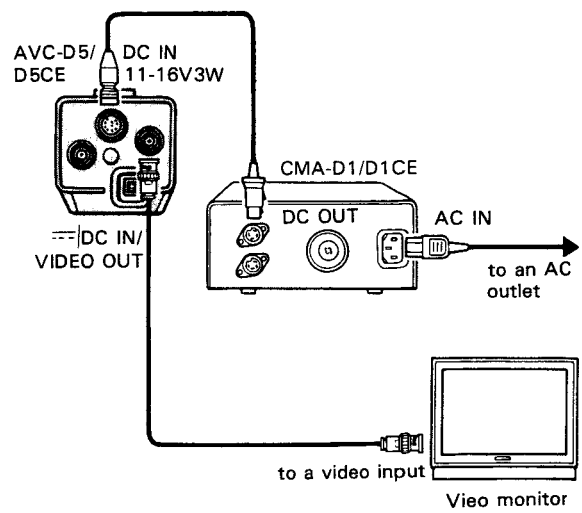


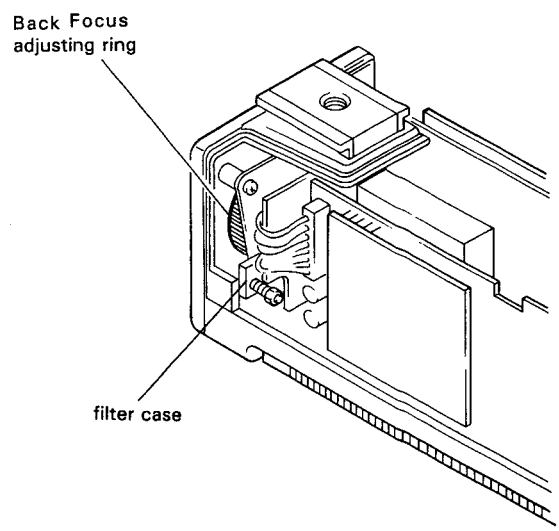
monitor picture

Using with the CMA-D5/D5CE AC adaptor.



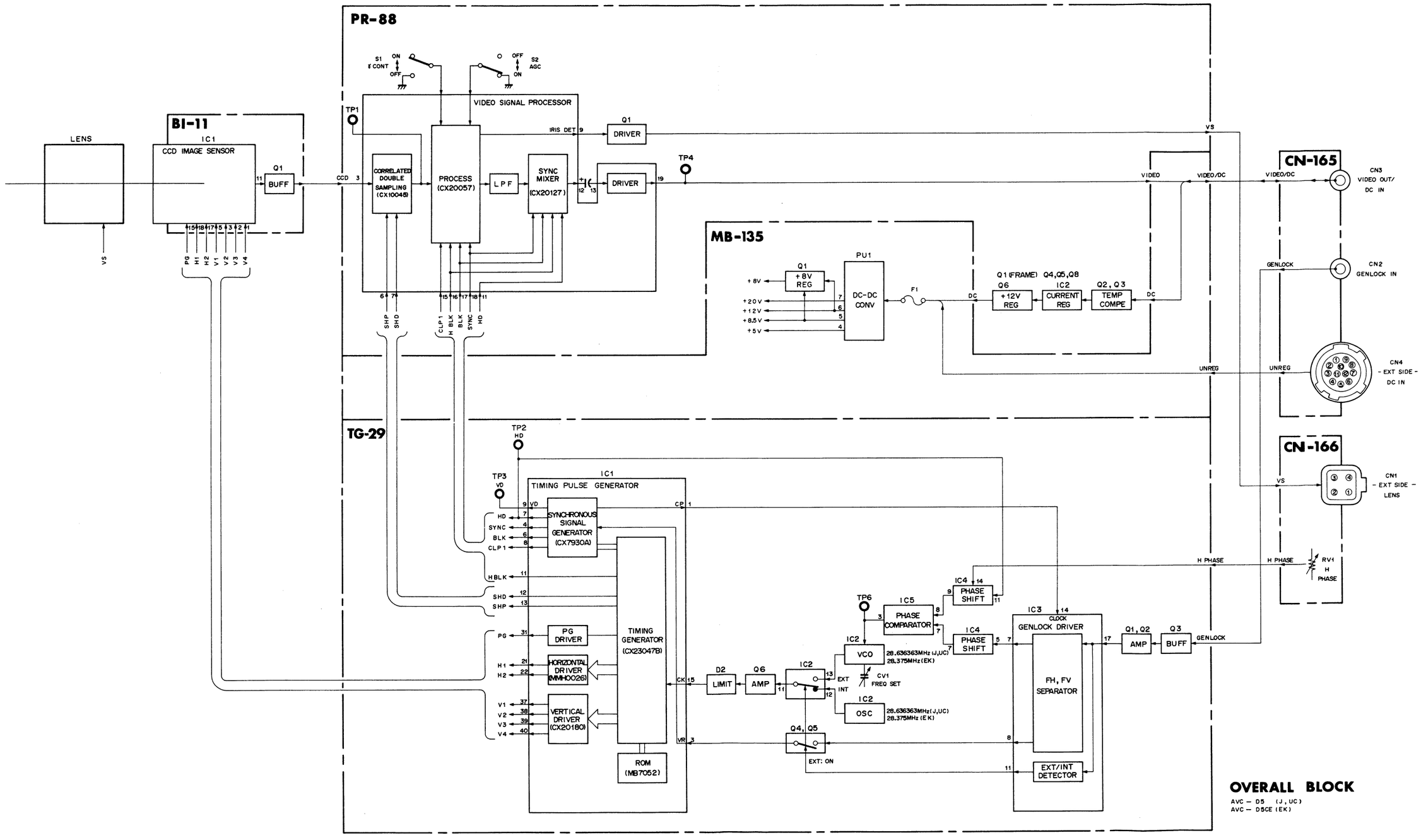
Using with the CMA-D1/D1CE camera adaptor.





SECTION 3
DIAGRAM

3-1. BLOCK DIAGRAM

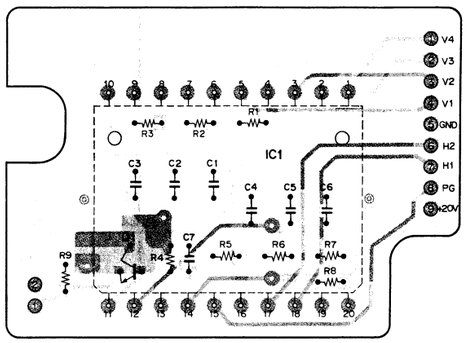


MOUNTING DIA MOUNTING DIA

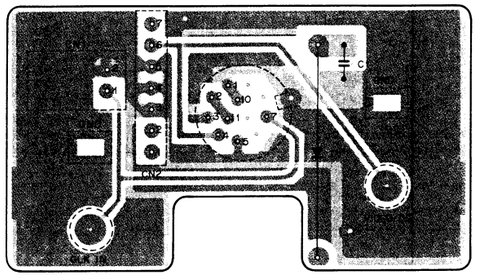
Ser. No. 10001~10050 (UC)
10001~10010 (J)
10001~10040 (EK)

3-2. MOUNTING DIAGRAM

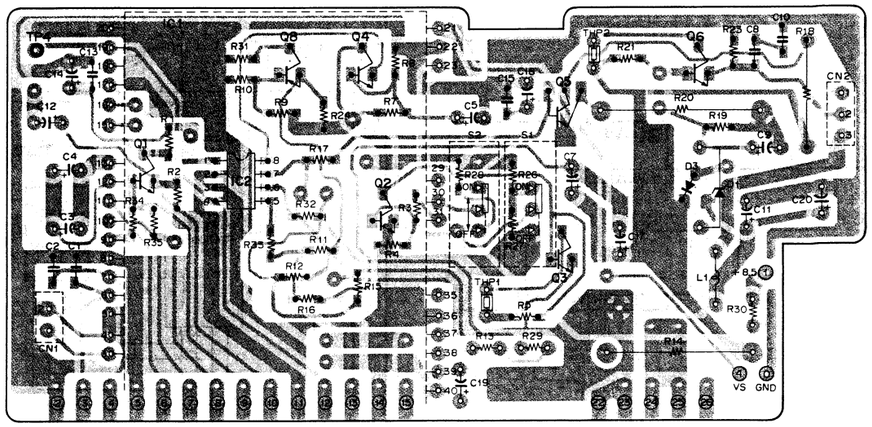
BI-11 BOARD
CN-165 BOARD
CN-166 BOARD
MB-135 BOARD
PR-88 BOARD
TG-29 BOARD



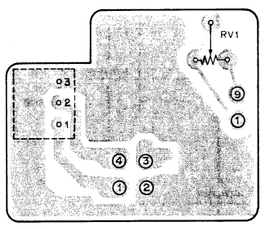
BI-11 BOARD
—SOLDERING SIDE—
1-621-232-11
AVC-D5 (J,UC)
AVC-D5CE(EK)



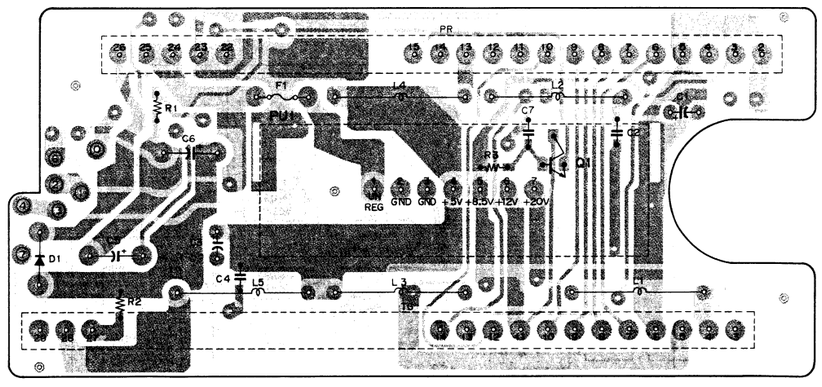
CN-165 BOARD
-SOLDERING SIDE-
1-621-233-11
AVC-D5 (J,UC)
AVC-D5CE (EK)



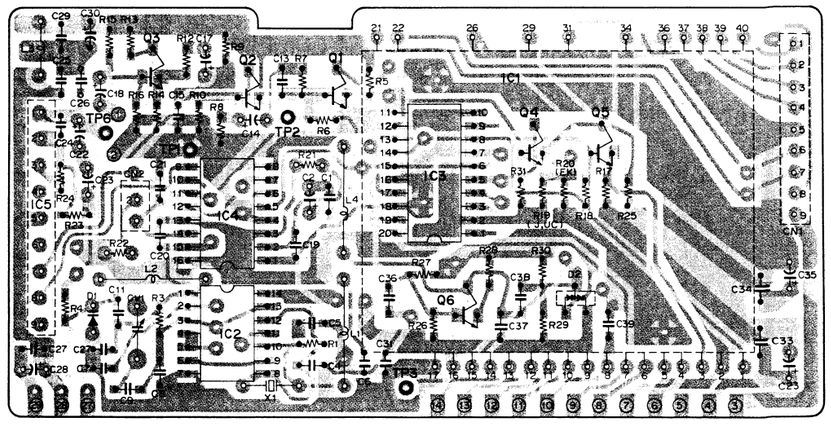
PR-88 BOARD
—SOLDERING SIDE—
1-621-231-11
AVC-D5 (J,UC)
AVC-D5CE(EK)



CN-166 BOARD
-SOLDERING SIDE-
1-621-234-11
AVC-D5 (J,UC)
AVC-D5CE (EK)



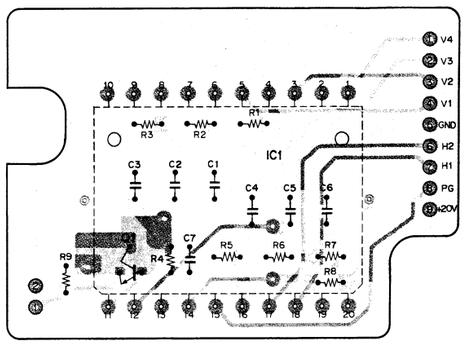
MB-135 BOARD
-SOLDERING SIDE-
1-621-229-11
AVC-D5 (J,UC)
AVC-D5CE (EK)



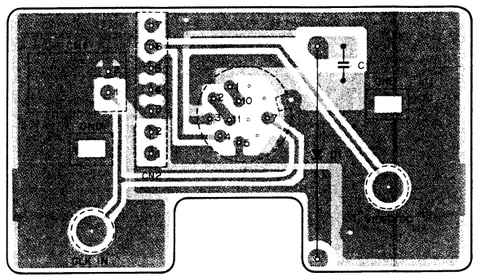
TG-29 BOARD
— SOLDERING SIDE —
1-621-230-11
AVC-D5 (J,UC)
AVC-D5CE (EK)

MOUNTING DIA **MOUNTING DIA**

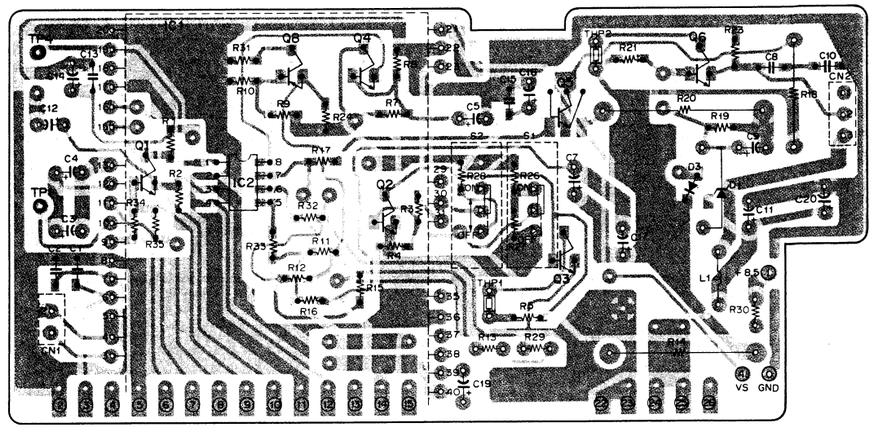
Ser. No. 10051~	(UC)
10011~	(J)
10041~	(EK)



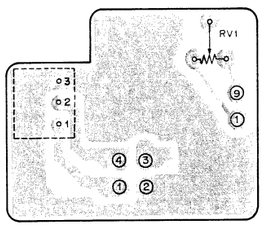
BI-11 BOARD
—SOLDERING SIDE—
1-621-232-11
AVC-D5 (J,UC)
AVC-D5CE(EK)



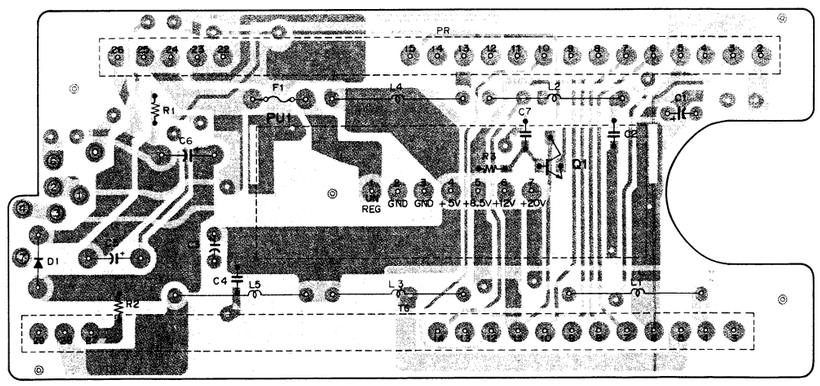
CN-165 BOARD
-SOLDERING SIDE-
1-621-233-11
AVC-D5 (J,UC)
AVC-D5CE (EK)



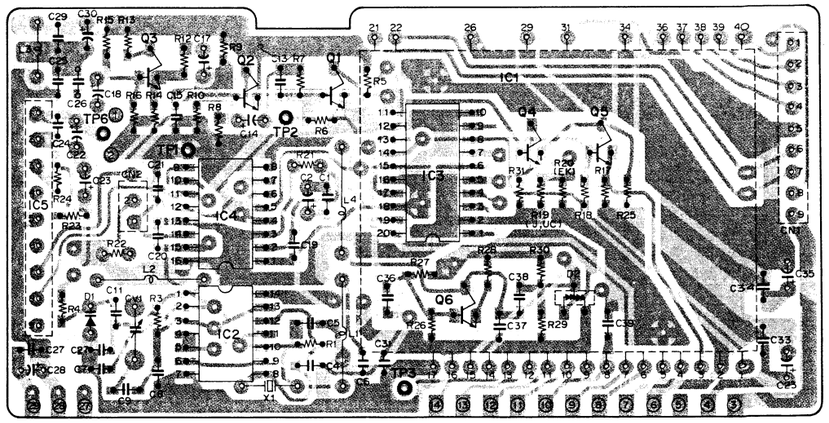
PR-88 BOARD
—SOLDERING SIDE—
1-621-231-12
AVC-D5 (J,UC)
AVC-D5CE(EK)



CN-166 BOARD
-SOLDERING SIDE-
1-621-234-11
AVC-D5 (J,UC)
AVC-D5CE (EK)



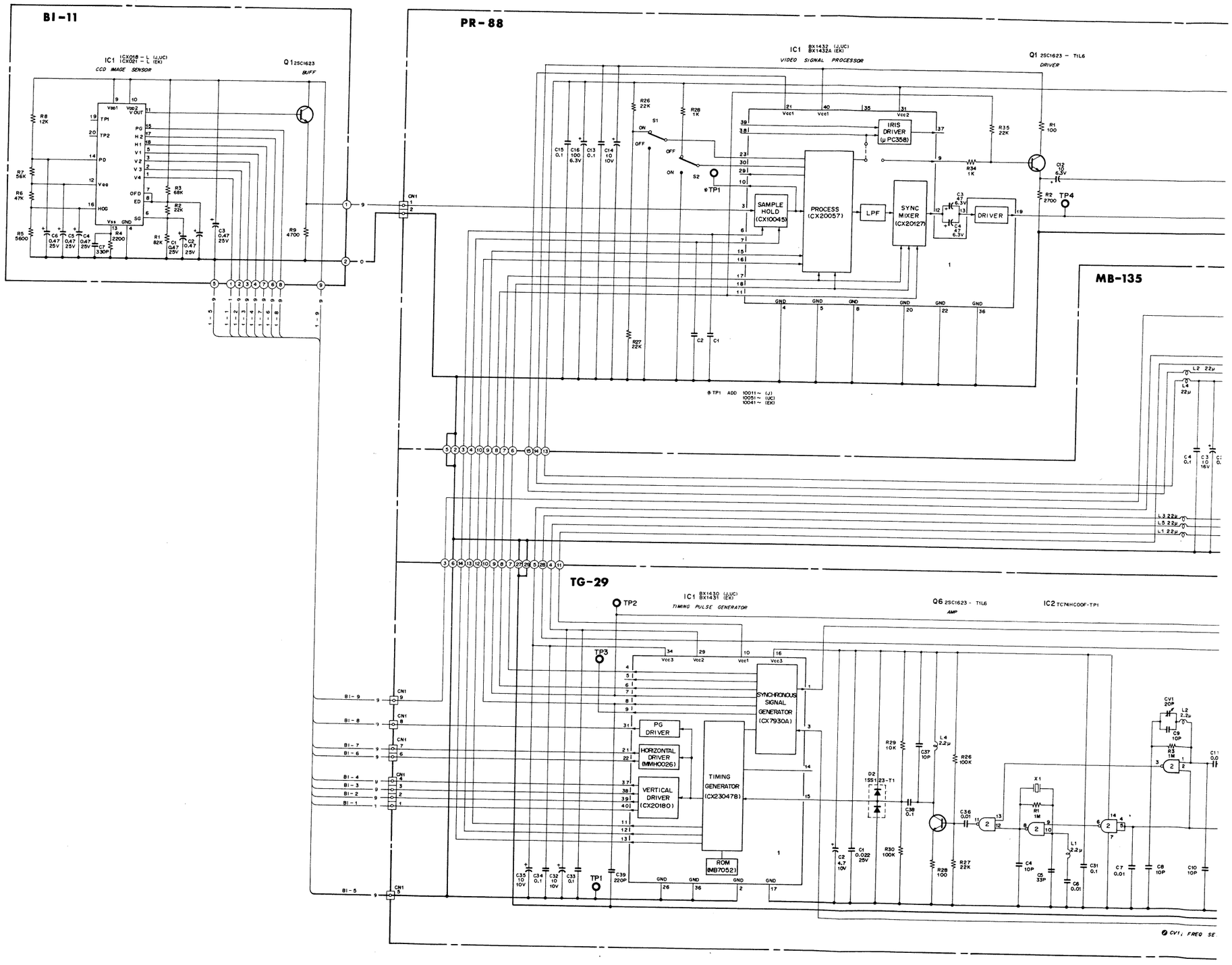
MB-135 BOARD
-SOLDERING SIDE-
1-621-229-11
AVC-D5 (J,UC)
AVC-D5CE (EK)

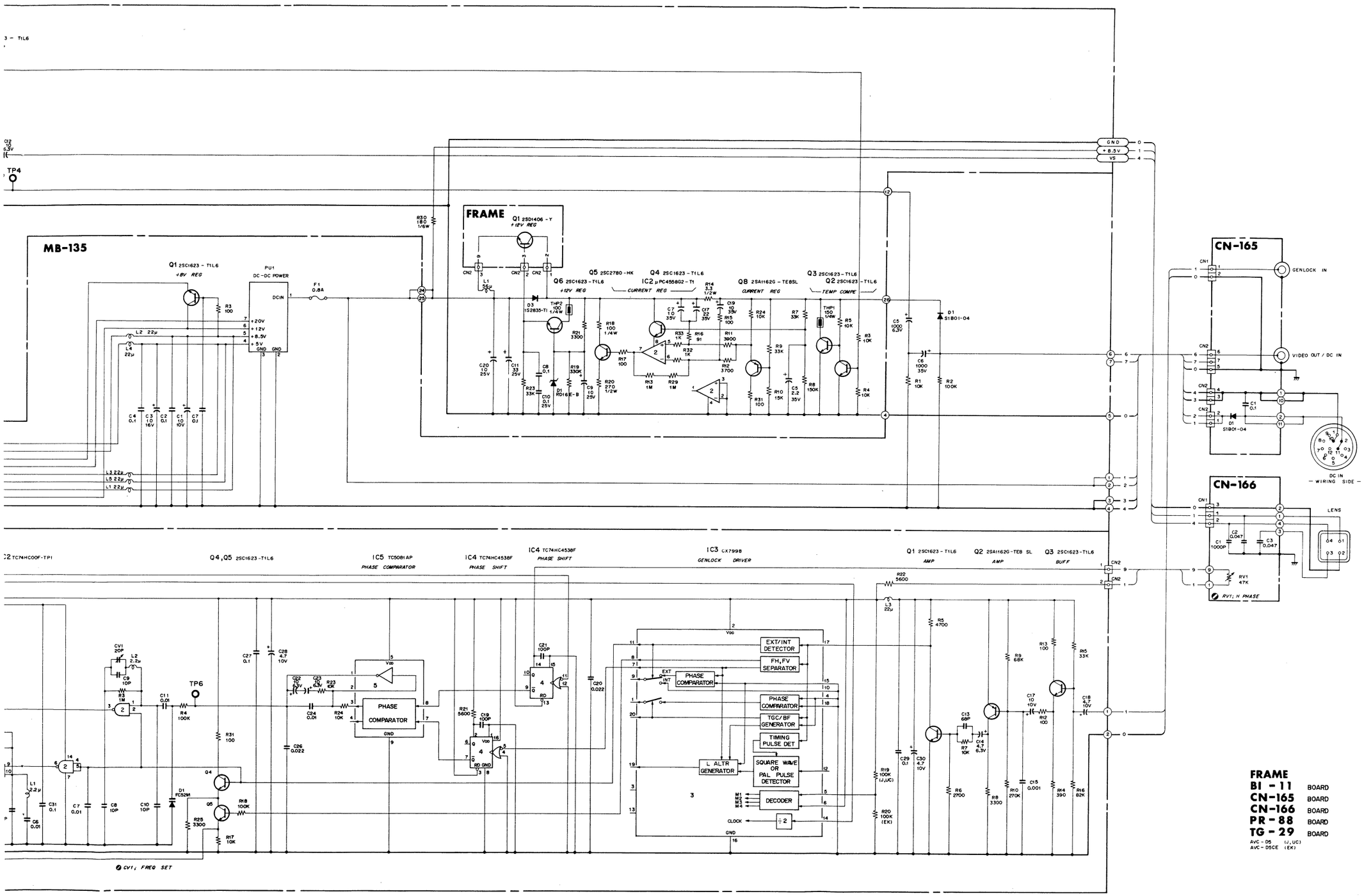


TG-29 BOARD
— SOLDERING SIDE —
1-621-230-11
AVC-D5 (J,UC)
AVC-D5CE (EK)

FRAME FRAME

3-3. SCHEMATIC DIAGRAM





FRAME

BI - 11	BOARD
CN-165	BOARD
CN-166	BOARD
PR - 88	BOARD
TG - 29	BOARD

AVC - D5 (J,UC)
AVC - D5CE (EK)

SECTION 4
SEMICONDUCTOR PIN ASSIGNMENTS

The circuit diagram of IC is obtained from the IC data book published by the manufacturer.

TYPE PAGE

1S2835.....4-2
1SS123.....4-2

2SA1162G.....4-2

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2SC2757.....4-2
2SC2780.....4-2

2SD1406.....4-2

BX1430.....4-3
BX1431.....4-3
BX1432.....4-3
BX1432A.....4-3

CX7998

ERC24-06S.....4-2

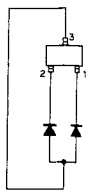
FC52M.....4-2

RD16EB2.....4-4

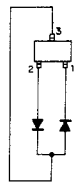
TC5081AP.....4-4
TC74HC00F.....4-4
TC74HC4538F.....4-4

uPC4558G2.....4-4

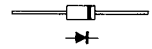
144-4
TOP VIEW (SCALE 4/1) 1S2835



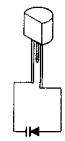
144-3
TOP VIEW (SCALE 4/1) 1SS123



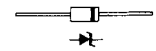
63-1 ERC24-??S



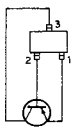
1-8 FC52M



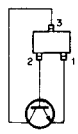
63-2 RD??EB?



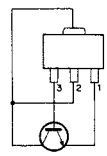
144-1
TOP VIEW (SCALE 4/1) 2SA1162G



144-2
TOP VIEW (SCALE 4/1) 2SC1623
2SC2757

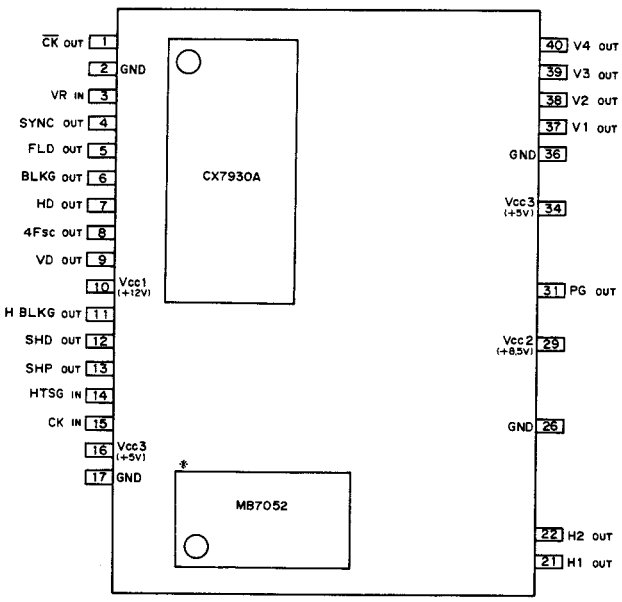


108-2
TOP VIEW (SCALE 4/1) 2SC2780

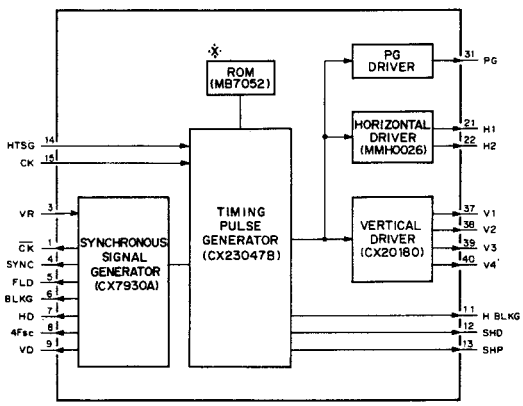


89-1 2SD1406

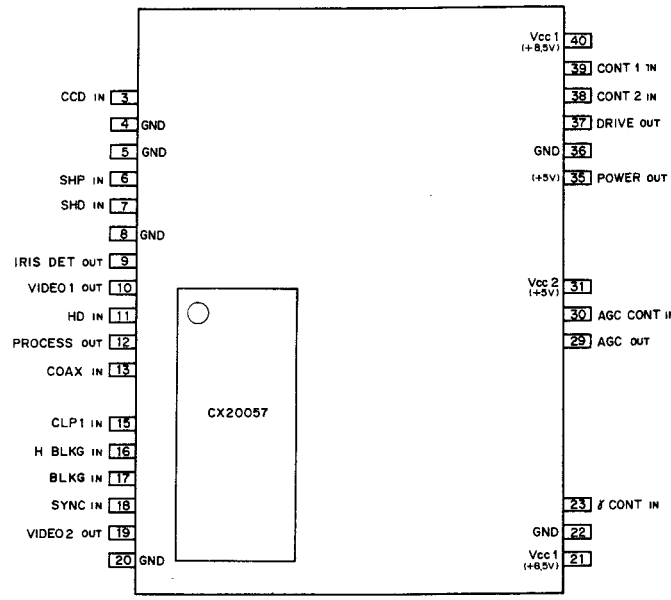
BX1430 (SONY)
BX1431 (SONY)
TIMING PULSE GENERATOR FOR CCD CAMERA
— TOP VIEW —

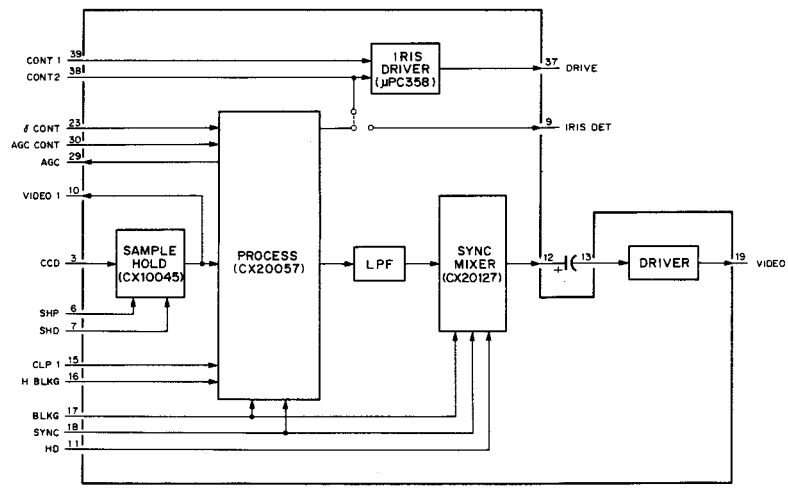


※MB7052はマウントされていません。
ROM "MB7052" is not supplied.
Mount is on BX1430 in case of CCD's blemish compensation.

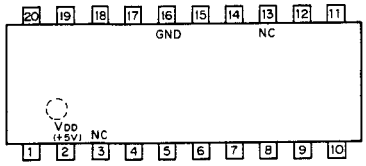


BX1432 (SONY)
BX1432A (SONY)
VIDEO SIGNAL PROCESSOR FOR CCD CAMERA
— TOP VIEW —





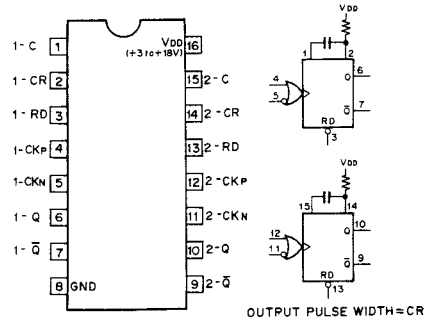
CX7998 (SONY) FLAT PACKAGE
C-MOS GENLOCK DRIVER FOR CX773A
— TOP VIEW —



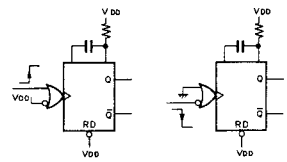
INPUTS		EXT LOCK MODE	
MODE 1	MODE 2		
0	0	M 1	PAL:VBS
1	0	M 2	PAL-M:VBS
0	1	M 3	PAL:VS/SC/LALT
			SECAM:VS/SC/LALT
1	1	M 4	NTSC:VBS
			NTSC:VS/SC
			PAL-M:VS/SC/LALT

0; LOW LEVEL
1; HIGH LEVEL

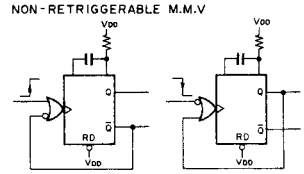
TC74HC4538F (TOSHIBA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE
MONOSTABLE MULTIVIBRATOR
— TOP VIEW —



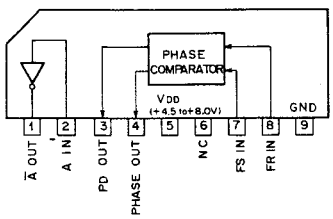
RETRIGGERABLE M.M.V



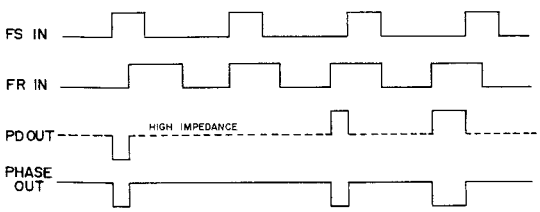
NON-RETRIGGERABLE M.M.V



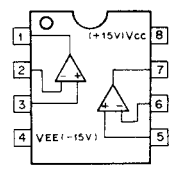
TC5081AP (TOSHIBA)
C-MOS PHASE COMPARATOR
— SIDE VIEW —



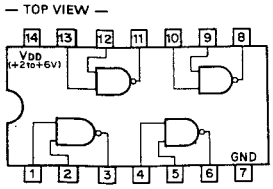
PHASE COMPARATOR TIMING CHART

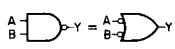


uPC4558G2 (NEC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



TC74HC00F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —





A	B	Y	
0	0	1	
0	1	1	
1	0	1	0; LOW LEVEL
1	1	0	1; HIGH LEVEL

SECTION 5
SPARE PARTS

5-1. PARTS INFORMATION

1. **Safety Related Component Warning**

   Components identified by shading marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose parts numbers appear as shown in this manual or in service bulletins and service manual supplements published by Sony.

2. Replacement Parts supplied from Sony Parts Center will sometimes have different shape and outside view from the parts which actually in use. This is due to "**accommodating the improved parts and/or engineering changes**" or "**standardization of genuine parts.**"

   - This manual's exploded views and electrical spare parts lists are indicating the parts numbers of "the standardized genuine parts at present".
   - Regarding engineering parts changes in our engineering department, refer Sony service bulletins and service manual supplements.

3. **Printed Components in Bold-Face type** on the exploded views and electrical spare parts list are normally stocked for replacement purposes. The remaining parts are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.

4. Item with no part number and/or no description are not stocked because they are seldom required for routine service.

5. **Abbreviation**

REF. NO.	DESCRIPTION	REF. NO.	DESCRIPTION	REF. NO.	DESCRIPTION
C	CAPACITOR	**IC**	IC	**RV**	VARIABLE RESISTOR
CN	CONNECTOR	**L**	INDUCTOR	**S**	SWITCH
CV	VARIABLE CAPACITOR	**PU**	CONVERTER	**THP**	THERMISTOR (POSITIVE)
D	DIODE	**Q**	TRANSISTOR	**X**	OSCILLATOR
F	FUSE	**R**	RESISTOR		

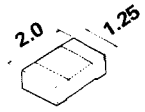
All capacitors are in micro farads unless otherwise specified.
All inductors are in micro henries unless otherwise specified.
All resistors are in ohms.

5-2. ELECTRICAL PARTS

RESISTOR

Parts that are not listed in the "reference numbers order list" are shown in following table.
Reference numbers are omitted.

CHIP RESISTOR



±5% 1/10W
0Ω through 3.3MΩ

Parts No. 1-216-□□□-00

Value	Parts No. – □□□ –
0Ω	295
1Ω	—
1.1	—
1.2	—
1.3	—
1.5	—
1.6	—
1.8	—
2	—
2.2	298
2.4	301
2.7	302
3	303
3.3	304
3.6	305
3.9	306
4.3	307
4.7	308
5.1	297
5.6	309
6.2	310
6.8	311
7.5	312
8.2	313
9.1	314
10Ω	001
11	002
12	003
13	004
15	005
16	006
18	007
20	008
22	009
24	010
27	011

Value	Parts No. – □□□ –
30	012
33Ω	013
36	014
39	015
43	016
47	017
51	018
56	019
62	020
68	021
75	022
82	023
91	024
100Ω	025
110	026
120	027
130	028
150	029
160	030
180	031
200	032
220	033
240	034
270	035
300	036
330	037
360	038
390	039
430	040
470	041
510	042
560	043
620	044
680	045
750	046
820	047

Value	Parts No. – □□□ –
910	048
1kΩ	049
1.1	050
1.2	051
1.3	052
1.5	053
1.6	054
1.8	055
2	056
2.2	057
2.4	058
2.7	059
3	060
3.3	061
3.6	062
3.9	063
4.3	064
4.7	065
5.1	066
5.6	067
6.2	068
6.8	069
7.5	070
8.2	071
9.1	072
10kΩ	073
11	074
12	075
13	076
15	077
16	078
18	079
20	080
22	081
24	082
27	083

Value	Parts No. – □□□ –
30	084
33kΩ	085
36	086
39	087
43	088
47	089
51	090
56	091
62	092
68	093
75	094
82	095
91	096
100kΩ	097
110	098
120	099
130	100
150	101
160	102
180	103
200	104
220	105
240kΩ	106
270	107
300	108
330	109
360	110
390	111
430	112
470	113
510	114
560	115
620	116
680	117
750	118
820	119

Value	Parts No. – □□□ –
910	120
1MΩ	121
1.1	122
1.2	123
1.3	124
1.5	125
1.6	126
1.8	127
2	128
2.2	129
2.4	130
2.7	131
3	132
3.3	133

Ref. No.	Part No.	Description

BI-11 BOARD

	A-7520-280-A	MOUNTED CIRCUIT BOARD "BI-11"
C1	**1-135-083-00**	**TANTAL CHIP 0.47 10% 25V**
C2	**1-135-083-00**	**TANTAL CHIP 0.47 10% 25V**
C3	**1-135-083-00**	**TANTAL CHIP 0.47 10% 25V**
C4	**1-135-083-00**	**TANTAL CHIP 0.47 10% 25V**
C5	**1-135-083-00**	**TANTAL CHIP 0.47 10% 25V**
C6	**1-135-083-00**	**TANTAL CHIP 0.47 10% 25V**
C7	**1-163-263-00**	**CERAMIC CHIP 330PF 5% 50V**
IC1	**8-752-601-83**	**ICX018-L: SONY (UC)**
	8-752-602-15	**ICX021-L: SONY (EK)**
Q1	**8-729-100-66**	**2SC1623**
R1	**1-216-095-00**	**METAL CHIP 82K 5% 1/10W**
R2	**1-216-081-00**	**METAL CHIP 22K 5% 1/10W**
R3	**1-216-093-00**	**METAL CHIP 68K 5% 1/10W**
R4	**1-216-057-00**	**METAL CHIP 2.2K 5% 1/10W**
R5	**1-216-067-00**	**METAL CHIP 5.6K 5% 1/10W**
R6	**1-216-089-00**	**METAL CHIP 47K 5% 1/10W**
R7	**1-216-091-00**	**METAL CHIP 56K 5% 1/10W**
R8	**1-216-075-00**	**METAL CHIP 12K 5% 1/10W**
R9	**1-216-065-00**	**METAL CHIP 4.7K 5% 1/10W**

Ref. No.	Part No.	Description

CN-165 BOARD

	1-621-233-11	PRINTED CIRCUIT BOARD "CN-165"
C1	**1-163-038-00**	**CERAMIC CHIP 0.1 +80% -20% 25V**
CN1	1-564-012-00	RECEPTACLE, 2P MALE
	1-562-147-11	PLUG HOUSING 2P
	1-564-026-00	**PLUG CONTACT**
CN2	1-564-006-11	RECEPTACLE, 7P MALE
	1-562-152-11	PLUG HOUSING 7P
	1-564-026-00	**PLUG CONTACT**
D1	**8-719-924-06**	**ERC24-06S**

CN-166 BOARD

	1-621-234-11	PRINTED CIRCUIT BOARD "CN-166"
C1	**1-163-141-00**	**CERAMIC CHIP 0.001 5% 50V**
C2	**1-163-035-00**	**CERAMIC CHIP 0.047 +80% -20% 50V**
C3	**1-163-035-00**	**CERAMIC CHIP 0.047 +80% -20% 50V**
CN1	1-564-013-00	RECEPTACLE, 3P MALE
	1-562-148-11	PLUG HOUSING 3P
	1-564-026-00	**PLUG CONTACT**
RV1	**1-226-774-00**	**METAL 47K**

MB-135 BOARD

Ref. No.	Part No.	Description
	A-7520-281-A	MOUNTED CIRCUIT BOARD "MB-135"
C1	1-127-489-00	ELECT (SOLID) 10 20% 10V
C2	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C3	1-127-489-00	ELECT (SOLID) 10 20% 10V
C4	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C5	1-124-471-00	ELECT 1000 20% 6.3V
C6	1-124-901-00	ELECT 1000 20% 35V
C7	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
D1	8-719-924-06	ERC24-06S
⚠ F1	1-532-775-11	MICRO SECONDALY 0.8A 125V
L1	1-408-121-00	MICRO 22
L2	1-408-121-00	MICRO 22
L3	1-408-121-00	MICRO 22
L4	1-408-121-00	MICRO 22
L5	1-408-121-00	MICRO 22
PU1	1-464-746-11	DC-DC CONVERTER
Q1	8-729-100-66	2SC1623
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W
R2	1-216-097-00	METAL CHIP 100K 5% 1/10W
R3	1-216-025-00	METAL CHIP 100 5% 1/10W

PR-88 BOARD

Ref. No.	Part No.	Description
	A-7513-486-A	MOUNTED CIRCUIT BOARD "PR-88" (UC)
	A-7513-487-A	MOUNTED CIRCUIT BOARD "PR-88" (EK)
C3	1-124-224-00	ELECT 47 20% 6.3V
C4	1-124-224-00	ELECT 47 20% 6.3V
C5	1-124-257-00	ELECT 2.2 20% 35V
C7	1-131-353-00	TANTALUM 10 10% 35V
C8	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C9	1-124-240-00	ELECT 10 20% 25V
C10	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C11	1-124-242-00	ELECT 33 20% 25V
C12	1-124-233-00	ELECT 10 20% 6.3V
C13	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C14	1-127-489-00	ELECT (SOLID) 10 20% 10V
C15	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C16	1-124-225-00	ELECT 100 20% 6.3V
C17	1-131-349-00	TANTALUM 2.2 10% 35V
C19	1-131-353-00	TANTALUM 10 10% 35V
C20	1-127-512-00	ELECT (SOLID) 10 20% 25V
CN1	1-564-001-11	RECEPTACLE, 2P MALE
	1-562-147-11	PLUG HOUSING 2P
	1-564-026-00	PLUG CONTACT
CN2	1-564-002-00	RECEPTACLE, 3P MALE
	1-562-148-11	PLUG HOUSING 3P
	1-564-026-00	PLUG CONTACT
D1	8-719-100-74	RD16EB2
D3	8-719-100-03	1S2835
IC1	8-741-143-20	BX1432: SONY (UC)
	8-741-143-21	BX1432A: SONY (EK)
IC2	8-759-100-96	μPC4558G2: NEC
L1	1-408-418-00	MICRO 56

Ref. No.	Part No.	Description
Q1	8-729-100-66	2SC1623
Q2	8-729-100-66	2SC1623
Q3	8-729-100-66	2SC1623
Q4	8-729-100-66	2SC1623
Q5	8-729-104-27	2SC2780-NK
Q6	8-729-100-66	2SC1623
Q8	8-729-216-22	2SA1162G
R11	1-216-665-11	METAL CHIP 3.0K 0.5% 1/16W
R12	1-216-665-11	METAL CHIP 3.0K 0.5% 1/16W
R13	1-215-493-00	METAL 1M 1% 1/6W
R14	1-244-813-00	CARBON 3.3 5% 1/2W
R15	1-216-627-11	METAL CHIP 100 0.5% 1/16W
R16	1-216-626-11	METAL CHIP 91 0.5% 1/16W
R18	1-247-700-11	CARBON 100 5% 1/4W
R20	1-247-226-00	CARBON 270 5% 1/2W
R29	1-215-493-00	METAL 1M 1% 1/6W
R30	1-247-813-00	CARBON 180 5% 1/6W
R32	1-216-615-11	METAL CHIP 1K 0.5% 1/16W
R33	1-216-651-11	METAL CHIP 1K 0.5% 1/16W
S1	1-554-142-00	SLIDE
S2	1-554-142-00	SLIDE
THP1	1-202-861-11	SOLID 150 1/4W
THP2	1-202-860-00	SOLID 100 1/4W

Ref. No.	Part No.	Description

TG-29 BOARD

	A-7513-488-A	MOUNTED CIRCUIT BOARD "TG-29" (UC)
	A-7513-489-A	MOUNTED CIRCUIT BOARD "TG-29" (EK)
C1	1-163-033-00	CERAMIC CHIP 0.022 10% 25V
C2	1-127-487-00	ELECT (SOLID) 4.7 20% 10V
C4	1-163-093-00	CERAMIC CHIP 10PF 5% 50V
C5	1-163-105-00	CERAMIC CHIP 33PF 5% 50V
C6	1-163-021-00	CERAMIC CHIP 0.01 10% 50V
C7	1-163-021-00	CERAMIC CHIP 0.01 10% 50V
C8	1-163-093-00	CERAMIC CHIP 10PF 5% 50V
C9	1-163-093-00	CERAMIC CHIP 10PF 5% 50V
C10	1-163-093-00	CERAMIC CHIP 10PF 5% 50V
C11	1-163-021-00	CERAMIC CHIP 0.01 10% 50V
C13	1-163-113-00	CERAMIC CHIP 68PF 5% 50V
C14	1-131-375-00	TANTALUM 4.7 10% 6.3V
C15	1-163-141-00	CERAMIC CHIP 0.001 5% 50V
C17	1-131-377-00	TANTALUM 10 10% 10V
C18	1-131-375-00	TANTALUM 4.7 10% 10V
C19	1-163-117-00	CERAMIC CHIP 100PF 5% 50V
C20	1-163-033-00	CERAMIC CHIP 0.022 10% 25V
C21	1-163-117-00	CERAMIC CHIP 100PF 5% 50V
C22	1-131-383-00	TANTALUM 10 10% 6.3V
C23	1-131-383-00	TANTALUM 10 10% 6.3V
C24	1-163-021-00	CERAMIC CHIP 0.01 10% 50V
C25	1-163-033-00	CERAMIC CHIP 0.022 10% 25V
C26	1-163-033-00	CERAMIC CHIP 0.022 10% 25V
C27	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C28	1-127-487-00	ELECT (SOLID) 4.7 20% 10V
C29	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C30	1-127-487-00	ELECT (SOLID) 4.7 20% 10V
C31	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C32	1-127-489-00	ELECT (SOLID) 10 20% 10V
C33	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C34	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C35	1-127-489-00	ELECT (SOLID) 10 20% 10V
C36	1-163-021-00	CERAMIC CHIP 0.01 10% 50V
C37	1-163-093-00	CERAMIC CHIP 10PF 5% 50V
C38	1-163-038-00	CERAMIC CHIP 0.1 +80% -20% 25V
C39	1-163-125-00	CERAMIC CHIP 220PF 5% 50V

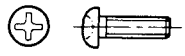
TG-29, FRAME

Ref. No.	Part No.	Description
CN1	1-564-008-00	RECEPTACLE, 9P MALE
	1-562-154-00	PLUG HOUSING 9P
	1-564-026-00	**PLUG CONTACT**
CN2	1-564-001-11	RECEPTACLE, 2P MALE
	1-562-147-11	PLUG HOUSING 2P
	1-564-026-00	**PLUG CONTACT**
CV1	**1-141-227-00**	**CERAMIC 20PF**
D1	**8-719-915-20**	**FC52M**
D2	**8-719-101-23**	**1SS123**
IC1	**8-741-143-00**	**BX1430: SONY (UC)**
	8-741-143-10	**BX1431: SONY (EK)**
IC2	**8-759-204-94**	**TC74HC00F: TOSHIBA**
IC3	**8-759-908-39**	**CX7998: SONY**
IC4	**8-759-206-55**	**TC74HC4538F: TOSHIBA**
IC5	**8-759-250-81**	**TC5081AP: TOSHIBA**
L1	**1-408-147-00**	**MICRO 2.2**
L2	**1-408-147-00**	**MICRO 2.2**
L3	**1-408-413-00**	**MICRO 22**
L4	**1-408-147-00**	**MICRO 2.2**
Q1	**8-729-100-66**	**2SC1623**
Q2	**8-729-216-22**	**2SA1162G**
Q3	**8-729-100-66**	**2SC1623**
Q4	**8-729-100-66**	**2SC1623**
Q5	**8-729-100-66**	**2SC1623**
Q6	**8-729-100-66**	**2SC1623**
R21	**1-215-439-00**	**METAL 5.6K 1% 1/6W**
R22	**1-215-439-00**	**METAL 5.6K 1% 1/6W**
X1	**1-567-708-11**	**28.636363MHz (UC)**
	1-567-732-11	**28.375MHz (EK)**

Ref. No.	Part No.	Description
FRAME		
CN1	**1-563-113-11**	**RECEPTACLE, 4P MALE "LENS"**
CN2	**1-562-382-12**	**RECEPTACLE, BNC "GENLOCK IN"**
CN3	**1-562-382-12**	**RECEPTACLE, BNC "VIDEO OUT/DC IN"**
CN4	**1-563-786-11**	**RECEPTACLE, 12P MALE "DC IN"**
Q1	**8-729-201-78**	**2SD1406**

5-3. EXPLODED VIEW SCREW

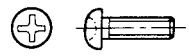
+B
Bzn-N



7-621-□□□-□□

SIZE	Parts No.
2 x 3	772-00
x 4	772-10
x 5	772-20
x 6	772-30
x 8	772-40
x 10	772-50
x 12	772-60
x 14	772-70
x 16	772-80
x 20	–
2.6 x 3	775-00
x 4	775-10
x 5	775-20
x 6	773-95
x 8	775-40
x 10	775-50
x 12	775-60
x 14	775-70
x 16	775-80
x 20	775-90

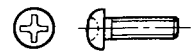
+B
Cr-N



7-621-□□□-□□

SIZE	Parts No.
2 x 3	772-08
x 4	772-18
x 5	771-06
x 6	772-38
x 8	772-48
x 10	772-58
x 12	772-68
x 14	772-78
x 16	772-88
x 20	–
2.6 x 3	775-08
x 4	773-86
x 5	770-87
x 6	770-67
x 8	770-99
x 10	773-87
x 12	775-68
x 14	775-78
x 16	775-88
x 20	773-91

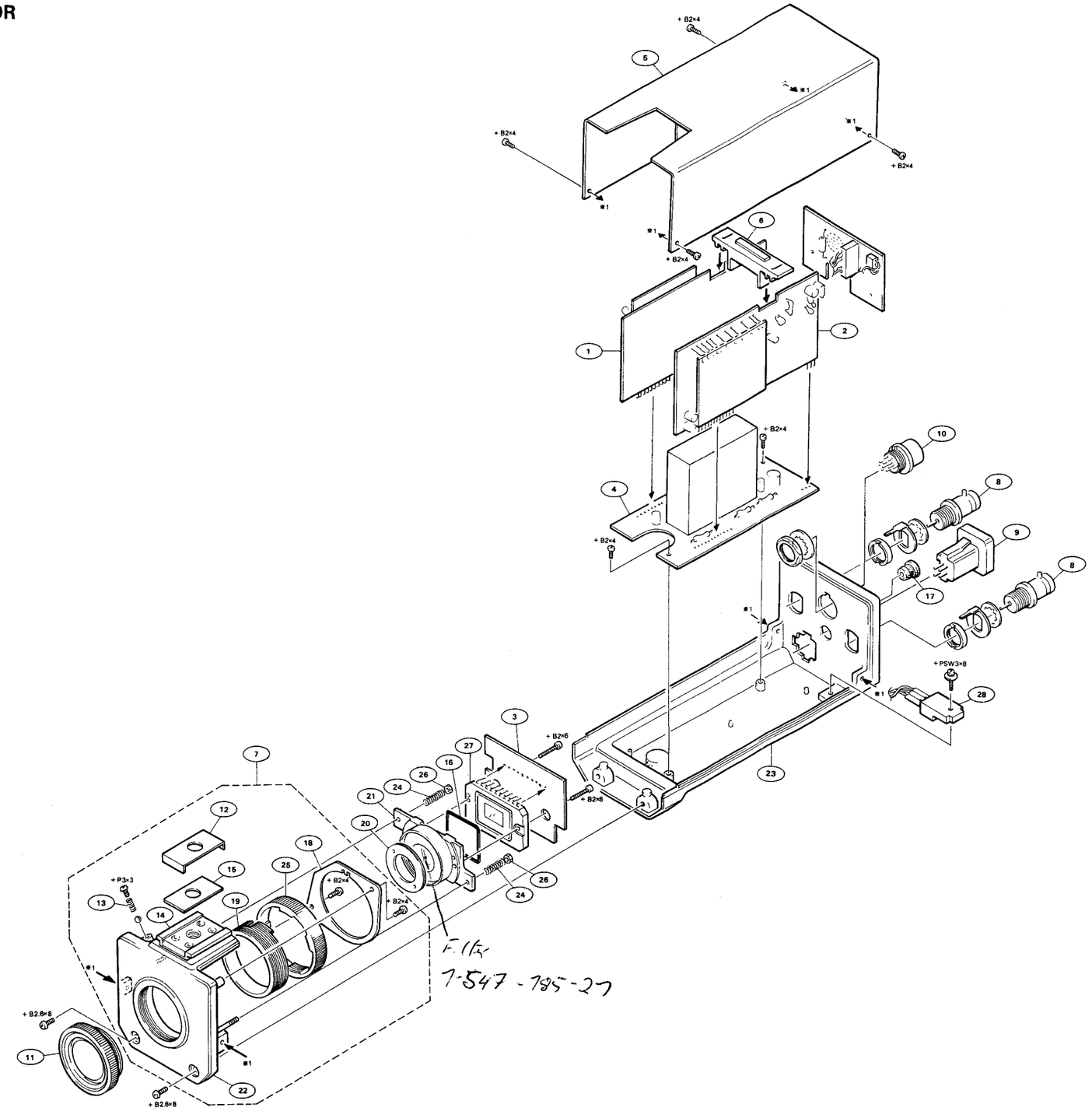
+B
Cr-N



7-682-□□□-□□

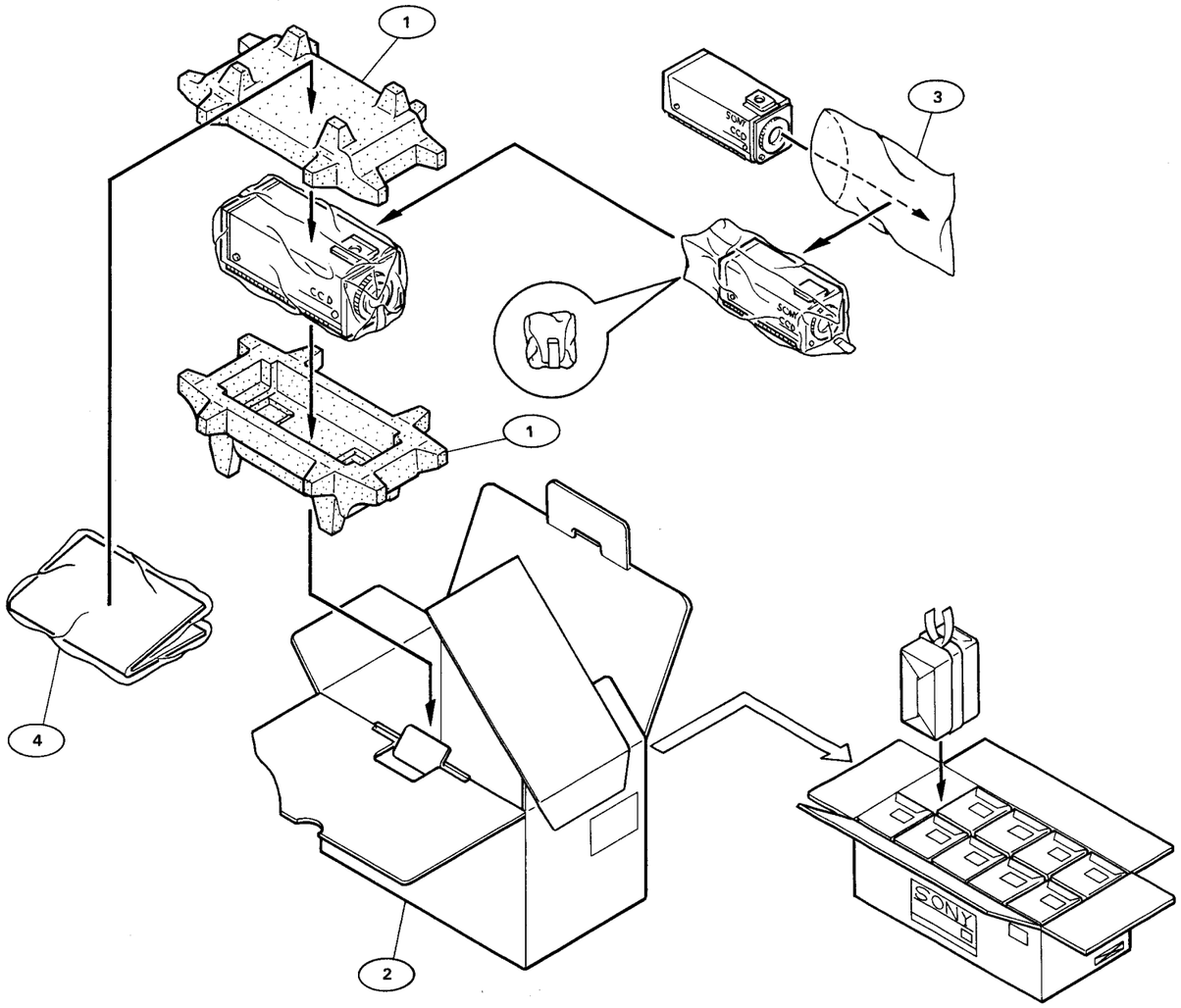
SIZE	Parts No.
3 x 3	544-04
x 4	545-04
x 5	546-04
x 6	547-04
x 8	548-04
x 10	549-04
x 12	550-04
x 14	551-04
x 16	552-04
x 20	553-04
4 x 4	558-04
x 5	559-04
x 6	560-04
x 8	561-04
x 10	562-04
x 12	563-04
x 14	564-04
x 16	565-04
x 20	566-04
5 x 8	574-04
x 10	575-04
x 12	576-04
x 14	577-04
x 16	578-04
x 20	579-04

CAMERA ADAPTOR



No.	Part No.	Description
1	A-7513-486-A	MOUNTED CIRCUIT BORAD "PR-88"
2	A-7513-488-A	MOUNTED CIRCUIT BORAD "TG-29"
3	A-7520-280-A	MOUNTED CIRCUIT BORAD "BI-11
4	A-7520-281-A	MOUNTED CIRCUIT BORAD "MB-135"
5	X-0336-609-0	CAVER ASSY
6	X-3683-213-1	HOLDER ASSY, PC BOARD
7	X-3683-217-1	PANEL ASSY, FRONT
8	**1-562-382-12**	**RECEPTACLE, BNC**
9	**1-563-113-11**	**RECEPTACLE, 4P MALE "LENS"**
10	**1-563-786-11**	**RECEPTACLE, ROUND TYPE 12P "DC IN"**
11	**2-042-385-00**	**CAP, C MOUNT**
12	2-277-468-01	PLATE, ORNAMENTAL, CAMERA SHOE
13	**3-563-463-00**	**SPRING, COMPRESSION**
14	**3-657-700-00**	**BRACKET, ACCESSORY**
15	3-672-213-00	SHEET, ADHESIVE
16	3-683-204-00	SEAL, SQUARE
17	3-683-255-01	CAP
18	3-683-257-01	RETAINER
19	3-683-259-01	RING, SLIDE
20	3-683-260-00	RING, RETAINER
21	3-683-272-01	CASE, FILTER
22	3-683-273-01	PANEL, FRONT
23	3-683-274-01	FRAME
24	3-698-802-01	SPRING, COMPRESSION
25	3-698-814-01	RING, ADJUSTMENT
26	**3-698-829-01**	**NUT (M2)**
27	**8-752-601-81**	**ICX018-L**
28	**8-729-201-78**	**2SD1406**

5-4. PACKING MATERIAL AND ACCESSORY (SUPPLIED)



No.	Part No.	Description
1	3-683-275-01	CUSHION
2	3-683-270-01	CARTON, INDIVIDUAL (UC)
	3-683-271-01	CARTON, INDIVIDUAL (EK)
3	**3-701-620-01**	**BAG, PORY (FOR AVC-D5/D5CE)**
4	**3-765-851-01**	**MANUAL, INSTRUCTION (UC)**
	3-765-851-11	**MANUAL, INSTRUCTION (EK)**
	3-701-625-01	**BAG, POLY (FOR MANUAL, etc.)**